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AN

EXPERIMENTAL HISTORY

OF THE

MATERIA MEDICA,

OR OF THE

NATURAL AND ARTIFICIAL SUBSTANCES

MADE USE OF IN

MEDICINE:

CONTAINING

A Compendious View of their NATURAL HISTORY,

AN ACCOUNT OF THEIR PHARMACEUTIC PROPERTIES,

And an Eſtimate of their MEDICINAL POWERS, ſo far as they can be aſcertained
by Experience, or by rational Induction from their ſenſible Qualities.

By WILLIAM LEWIS, M.B. F.R.S.

THE THIRD EDITION,
WITH NUMEROUS ADDITIONS AND CORRECTIONS
BY JOHN AIKIN.

Rationalem quidem puto Medicinam eſſe debere :
inſtrui vero ab evidentibus. CELSUS.

LONDON:
Printed for J. JOHNSON, in St. Paul's Church-Yard ; and R. BALDWIN, in Pater-noſter-Row.
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TO THE THIRD EDITION.

A Conſiderable time having elapſed ſince the laſt publication of Dr. Lewis's very valuable work, it was thought neceſſary, now that a new edition was demanded, to procure ſuch additions and corrections, as later improvements in natural hiſtory and medicine had produced, and which the author himſelf, had he now been living, would undoubtedly have made. For this purpoſe it was put into the hands of the preſent editor, who has in the following manner endeavoured to fulfil the intention of the publiſhers.

To every vegetable article he has ſubjoined the Linnæan name.

He has corrected all the references to the Edinburgh Pharmacopœia, both in the catalogue of ſimples, and the officinal preparations, by the laſt edition of that work.

He has added ſeveral entirely new articles; among which are all the new medicines received into the preſent Edinburgh catalogue, and ſuch others as have been recommended upon apparently ſufficient grounds in various publications, domeſtic and foreign.*

From the ſame ſources, and alſo from ſome marginal notes in Dr. Lewis's own copy of his work, he has derived many additional facts and obſervations relative to former articles. All the additional matter is diſtinguiſhed by an aſteriſk prefixed.

At the ſame time that the editor has ſo freely *added* to this work, he has not thought it allowable to *omit* any thing; though ſome of the articles are now expunged from the catalogues of materia medica, and the ſtate of medical theory has undergone conſiderable changes ſince the author wrote. It is ſtill, in every reſpect, Dr. Lewis's entire work.

WARRINGTON,
October 1, 1783.

JOHN AIKIN.

* Theſe are the new Articles.

Aer Fixus.
Cardamine.
Columbo.
Filix Mas.
Flammula Jovis.
Geoffræa Jamaicenſis.
Lichen Iſlandicus.
Lobelia Syphilitica.
Oenanthe Crocata.
Peruvianus Cortex Ruber.
Cinchona Carribæa.
Pulſatilla Nigricans.
Quaſſia.
Radix Lopeziana.
Rhododendron Chryſanthemum.
Spigelia.
Stramonium.
Viola Tricolor.
Winteranus Cortex.
Aconitum Napellus.
Curſuta.
Hippocaſtanum.

ERRATA.

Page 234. It is ſaid, by miſtake, that the extract of the ſeeds of hemlock, is the only officinal from that plant directed in the laſt Edinburgh diſpenſatory. The common extract, made with the juice of the leaves, inſpiſſated, and a fifth part of the powder of the leaves, is ordered under the title of *Succus ſpiſſatus Cicutæ.*

P. 396. *Lingua Cervina* is *not* expunged from the Pharm. Edinb.

N. B. See the Poſtſcript for ſome *omiſſions.*

PREFACE.

THE medicinal materials, in the infancy of phyſic neceſſarily few, were by degrees exuberantly multiplied; and new ones are ſtill, from time to time, diſcovered and introduced. Their eſtimation and uſe have been variable; ſubſtances at one time in high eſteem being often at another diſregarded, and thoſe which in one age had fallen into neglect being often in another revived; a fluctuation apparently owing, in many articles, to the fancy or caprice which influences other human things, and in many to ignorance or error. The deſign of the preſent work is, to examine the ſeveral ſubſtances which are or have been in repute; with a view to aſcertain, as far as poſſible, their real powers, and to eſtabliſh this important part of medicine on a juſt foundation. It will, perhaps, appear from this examination, that there are ſome materials of little ſignificance among thoſe which are retained in practice, and many of more utility among thoſe which are overlooked.

The materia medica is commonly underſtood to comprehend, not only the materials afforded by nature, but many of thoſe alſo which are prepared, produced, or compounded by art; as minium, potaſh and ſoap. In pharmacopœias, intended as directories, for the preparation of ſuch medicines only as are made in the ſhops, all thoſe artificial medicinal ſubſtances are referred to the materia medica, which are either brought from abroad, or commonly prepared by particular perſons, as articles of commerce. A ſcientific diſ-

tinction may, however, be fixed, independently of commercial conſiderations. Productions eſſentially different, in their medical and other properties, from the ſubject from which they were produced, and which had nothing analogous to them præexiſting in the ſubject; as the fixt alkaline ſalts of vegetables, and the volatile ſalts of animals;—compounds reſulting from the coalition of oppoſite ingredients; of ingredients which in mixture loſe their ſpecific powers, and form together a ſubſtance of new qualities; as neutral ſalts and ſoap;—the conſtituent parts of natural compounds of this kind, ſeparated and purified by art; as magneſia and the mineral acid ſpirits;—may be conſidered as diſtinct medicinal materials, or as articles of the materia medica, whereſoever they are prepared.

It were to be wiſhed, that the ſeveral ſubjects could be methodically arranged, from ſome qualities ſubſervient to medicinal intentions. This has been attempted by different writers, on different plans, but in my opinion with little ſucceſs: nor indeed does it ſeem to be practicable; the qualities of medicines being too intricate, and compounded, and multifariouſly diverſified, to ſerve for the baſis of any uſeful diſtribution of them. The diviſion into minerals, animals, and vegetables, and the ſubdiviſions into roots, barks, leaves, flowers, &c. are equally exceptionable; ſome ſubſtances not being clearly reducible to either of the three kingdoms, and different parts of one vegetable being commonly made uſe of. I know of no practicable method that promiſes any advantage above the alphabetic one; and what conveniency there is in this regards rather the author than the reader.

Each article may be conſidered in three points of view; as an object of natural, medicinal, and pharmaceutic hiſtory.

The office of natural hiſtory, ſo far as it relates to the materia medica, conſiſts, in diſtinguiſhing the ſeveral ſubſtances from one another by criteria drawn from their external form and ſtructure, and in aſcertaining their origin and production.

The criteria of natural hiſtory are peculiarly adapted to vegetables and animals in their entire and perfect ſtate; the form, ſtructure, and diſpoſition of the ſeveral parts, collectively conſidered, affording here generally ſufficient means, and indeed the only means, of diſtinguiſhing each particular ſpecies from all others. In this branch of knowledge, of late years ſo diligently cultivated and ſo remarkably improved as a general ſcience, little new matter can

can be expected in a work of the preſent kind. If, of the accounts given in detail by thoſe who have written profeſſedly on theſe ſubjects, the more intereſting and uſeful particulars relative to the medicinal articles, are perſpicuouſly and conciſely expreſſed; if the more obvious and invariable diſcriminative appearances are juſtly ſelected from the writings of others or aſſigned from my own obſervation, ſo as to render the deſcriptions ſtrictly definitive or characteriſtic, without regard to the ſyſtems of naturaliſts; I have in this point accompliſhed my intentions.

Of the diſtinct parts and productions of vegetables and animals, there are many, which cannot be ſufficiently diſcriminated by any external marks, and which require the aſſiſtance of characters drawn from pharmacy or pharmaceutic chemiſtry; that is, from their intrinſic properties. The criteria of natural hiſtory, ſtrictly ſo called, are ſtill more inſufficient, and thoſe of chemiſtry of conſequence more neceſſary, in regard to the products of the mineral kingdom; where, oftentimes, one and the ſame matter aſſumes different forms, and different kinds of matter the ſame form. In aſſigning the criteria drawn from this ſource, I have endeavoured to determine by experiment thoſe properties, which, at the ſame time that they are obvious and eaſily examined, may be fully characteriſtic of the ſubject in all its forms.

The medicinal hiſtory, or the knowledge of the powers and effects of medicines in the human body, though apparently a moſt eſſential branch of the healing art, has been far more incuriouſly cultivated, and ſtill, perhaps, continues leſs cleared from the errors of former ages, than any other ſcience. Even in theſe later times; after the arbitrary qualities of cold, hot, dry, and moiſt, and the ridiculous ſimilitudes and conceits which ſome enthuſiaſts of the laſt century relied on as a teſt of medicinal activity, had been exploded: the advancement of true medicinal hiſtory has met with many obſtructions; partly from the officiouſneſs of compilers in collecting and preſerving the fictitious virtues; partly from a fondneſs, in original writers, of aggrandizing their favourite medicines; partly from a fallacy, in aſcribing to a particular ingredient in a compoſition the effects which more powerful ones had produced, a fallacy which the exuberance of mixture made ſometimes unavoidable; partly from the difficulty of diſtinguiſhing, in many caſes, the real effects of medicines from the operations of nature unaſſiſted; partly from a practice, too common among writers on the materia medica, of barely enumerating the diſeaſes, or even the parts of the body in whoſe general diſeaſes, a medicine had,

had, or was ſuppoſed to have, done good, as if diſeaſes of the ſame parts, or of the ſame name, were always of the ſame nature, or were always to be treated by the ſame remedies. Medicinal hiſtory has perhaps ſuffered alſo from the miſapplication of other ſciences.

After botany had been regularly cultivated, and methodized into ſyſtems; it was obſerved that ſeveral of the plants, which had been ranged together from their agreement or affinity in botanic characters, agreed or were allied alſo in medicinal virtue. As nature appeared to have in ſome inſtances eſtabliſhed a connection of this kind, it was fondly preſumed that ſhe had done ſo in all; that, the virtues of ſome particular plants being known, thoſe of all the others, ranked in the ſame botanic claſs, might alſo be inferred; and accordingly rules have been drawn up, for judging of the virtues of plants upon this principle, by botaniſts of the greateſt name. But ſo far is a ſimilarity of virtue from obtaining through the ſeveral genera which conſtitute one claſs of vegetables, that frequently it does not obtain through the ſeveral ſpecies of one genus: there are ſolanums, lettuces, herb-mercuries, cucumbers, muſhrooms, &c. eſculent and deleterious; and even the ſame individual often varies, from culture or other circumſtances, as much as two plants which have no botanic affinity.

The chemiſts, in like manner, extending the diſcoveries of their uſeful art beyond the proper limits, endeavoured to inveſtigate the virtues of plants from the ſubſtances into which they are reſoluble by fire; and in this view, the French academicians analyſed almoſt all thoſe made uſe of in medicine. From their experiments it appears, that the ſubſtances thus obtained have no reſemblance in quality to the original vegetable, and can afford no foundation for judging of its virtues; that plants the moſt remote in virtue, purgative and aſtringent, poiſonous and eſculent, are changed by force of fire into ſimilar principles. It is matter of concern, that theſe analyſes ſhould have been preſerved in the poſthumous works of a writer ſo judicious as Mr. Geoffroy, while the editor was ſenſible that the author himſelf, in his later years, diſapproved of them.

There are, nevertheleſs, in moſt vegetables, certain ſenſible qualities, either obvious, or eaſily diſcoverable; which afford, under due reſtrictions, an excellent teſt of their virtues; and in which indeed, oftentimes, their virtues *wholly conſiſt. Aromatics, acrids, fetids, aſtringents, bitters, ſweets, acids, unctuous and mucilaginous ſubſtances, which comprehend the greater number of the articles of the vegetable kingdom, operate generally by ſuch qualities as are the immediate objects of ſmell and taſte; and from the degree of force with which they affect thoſe ſenſes, their degree of medicinal efficacy may be generally inferred. The ſmells and taſtes of the ſeveral materials, on which ſome have already laid conſiderable ſtreſs, but which for the moſt part have been either wholly neglected, or regarded only as they affect the medicine in point of elegance, I have examined with no little care: and though it is not to be ſuppoſed, that the particular degree of each can be preciſely determined; or its particular ſpecies, eſpecially in regard to ſmell, fully expreſſed in words, any otherwiſe than by compariſon with ſubſtances more known; or that any exact limits can be always fixed, as between fetid and aromatic, grateful and ungrateful; I nevertheleſs flatter myſelf, that the obſervations of this kind will furniſh, in many inſtances, ſufficient data to the phyſician for judging what may be expected from materials he has not experienced. In this part, as in the deſcriptive hiſtory, great aſſiſtance has been drawn from pharmaceutic chemiſtry: for, in many vegetables, the active matter is ſo far divided and diluted by the herbaceous inert ſubſtance; and in others, different kinds of active matter are ſo blended together; that they cannot be diſcovered, or diſtinguiſhed, till they are extracted, or ſeparated from one another, by the operations of chemiſtry.*

Some other experiments are, in particular caſes, very uſeful auxiliaries in this enquiry. Thus, a ſolution of vitriol of iron, made in water, is by many vegetables, turned to a black colour; by others, a ſolution of ſulphur, made in alkaline liquors, is rendered milky or turbid, and of a ſtrong fetid ſmell. It is not known, that any vegetable ſubſtance produces the firſt of theſe effects, but thoſe which have an aſtringent power; or that any produces the ſecond, but thoſe partaking of an acid, which unites with and neutralizes the alkaline matter in the liquor, and diſengages the ſulphur which was thereby kept diſſolved. By theſe criteria, lower degrees of aſtringency and acidity are often diſcovered, than the taſte gives any notice of.

The effects of medicines on the fluid and ſolid parts of dead animals; as their producing or reſolving coagulations, relaxing or contracting the fibres, promoting or retarding putrefaction, or varying the degree and the ſpecies *as well as the facility of the reſolution; afford likewiſe, in ſome caſes, conſiderable light into their medicinal operation. Of theſe caſes, however, the number appears to be much ſmaller than ſeems to have been imagined by the generality of thoſe who have proſecuted theſe enquiries; who have not, perhaps, ſufficiently conſidered, how different is the operation of medicines on animal ſubſtances in a vital and in an inanimate ſtate; and how much the fluids of an animal are influenced by the action of medicines on the ſolid parts: it is probable, that the operation of moſt medicines is immediately or principally upon the ſolids, and that the fluids are in moſt caſes only conſequentially affected. The fluids moſt likely to anſwer any uſeful purpoſe, in theſe ſorts of trials, are thoſe which are ſecreted into the alimentary canal: experiments on blood ſeem to be of no medical utility: green vitriol, mixed with the blood drawn from a vein, inſtead of rendering it more florid, the common medical effect of this chalybeate preparation, changes it grey: mercurials examined in the ſame manner, diſcover nothing of that remarkable colliquation, which they produce in the blood of living animals.*

There are ſubſtances, in which all the foregoing means of inveſtigation fail; and which operate by ſome latent power, of which they give little or no intimation to the ſenſes. Of this kind are moſt of the purgative, emetic, and narcotic plants; thoſe, which from their deleterious effects when taken in certain quantities, are called poiſonous; and moſt of the metallic bodies and their preparations. Experiments on brutes are here of uſe, but of limited uſe: for if prudence requires us to refrain from ſubſtances which are noxious to brutes, it does not always authorize us to venture on ſuch as may to them be innocent: experience ſhews, that the crocus of antimony, of which a grain or two operate on the human body as a virulent cathartic or emetic, may be given to horſes in the quantity of an ounce, without producing any very remarkable effect: that a moderate doſe of jalap throws a dog into convulſions, who could well bear a much greater quantity of opium than could be given with ſafety to a man. The virtues of theſe kinds of ſubſtances can be known only from their effects in the human body itſelf: and as, of all medicines, they have the moſt obvious and apparent effects; they are, happily, of all medicines, thoſe which admit of the leaſt deception, and in which, of conſequence, we can moſt avail ourſelves of the obſervations of former writers. Indeed many of them being now received in general practice, their powers have been determined by general experience.

With ſuch aſſiſtances as I could draw from theſe ſources or from my own experience, I have endeavoured to point out chiefly the primary effects of the ſeveral ſubjects, or the immediate ſenſible operation which conſtitutes their true medical character. I judged it uſeleſs to enter into an enumeration of diſeaſes in which a medicine is or is not proper, when the ſalutary or pernicious effects, which it produces in thoſe diſeaſes, are no other than obvious conſequences of its general power: it nevertheleſs appeared frequently neceſſary to ſpecify ſome particular caſes, as being either illuſtrative of the general power, or ſubſervient to its diſcovery, or where it could not be preciſely aſcertained.

The pharmaceutic hiſtory of ſimples, cloſely allied to the medicinal, regards, chiefly, the variations of their qualities in different ſtates and forms naturally or artificially induced; the ſeparability or non-ſeparability of their active principles by different menſtrua or different operations; and their miſcibility or non-miſcibility one with another. In theſe properties, remarkable diverſities and contrarieties are obſerved among the different medicinal ſimples, even among thoſe in which no material diſagreement has been generally ſuſpected. Thus, the virtue of ſome vegetables accompanies the fluid which they yield on being preſſed, while that of others remains behind locked up and concentrated in the ſubject, and that of others is deſtroyed in the operation: ſome plants, in being dried, loſe all their virtue, ſome have their virtue improved, and ſome have it changed to another kind: ſome, by infuſion, give out their virtue both to water and to ſpirit of wine, ſome to water only, ſome to ſpirit only, and ſome neither to one nor the other. Nor can theſe diverſities be reduced to any general rules, or any otherwiſe determined than by a ſeparate examination of each particular article.

This province belongs peculiarly to chemiſtry; but notwithſtanding its obvious importance to the practice of medicine, even the medical chemiſts have been very remiſs in the cultivation of it. I know only of two perſons, whoſe labours have been conſiderable, and whoſe ſucceſs may be applauded. Neumann, one of the firſt who, rejecting the uſeleſs analyſes of vegetables made by vehemence of fire, endeavoured to ſeparate their component parts, unaltered, by means of menſtrua; examined by this method a conſiderable number of the officinal drugs, not indeed directly in a medicinal view, but in the way of a general chemical enquiry into the products of nature. Cartheuſer, confining himſelf more cloſely to medicinal conſiderations, followed nearly Neumann's plan ſo far as it included theſe, and made ſundry valuable additions.

In the preſent work, the enquiry is extended to a far greater number of ſimples, and conducted likewiſe on ſomewhat different principles. The quantity of matter, which water or ſpirit extract from a plant, or which either menſtruum extracts after the action of the other, is, medicinally, of little importance to be known; unleſs it be known alſo, what are the preciſe qualities of the ſeveral preparations, whether the virtue of the plant reſides in the part extracted by one or the other menſtruum, or whether in this ſeparation of the parts of the ſubject, any active matter is diſcovered which was not perceptible before. And on the other hand, though the qualities of the infuſions, extracts, &c. be very carefully and minutely examined; yet if they are deſcribed independently of one another, and if no account is taken of the remaining ſubſtance of the plant, or of the vapour that exhales in the inſpiſſation of the ſpirituous tincture; it will be impoſſible, in many caſes, to judge between the diſſolving powers of water and ſpirit, or whether either is a complete menſtruum for the active parts, or whether the ſpirituous extract retains the full virtue of the ſubject, or whether a part of the virtue exhales or diſtills with the ſpirit. Without embarraſſing the reader with a minute hiſtory of experiments, I have given only their reſult, or the general pharmaceutic habitude of the ſubject deduced from them: it is in trying to make theſe general deductions from the experiments hitherto publiſhed, that their inſufficiency, in regard to the greater number of the articles, is moſt conſpicuous. I have nevertheleſs been obliged, in ſome caſes, by the multiplicity of the labour, and the difficulty of procuring ſpecimens of ſome few articles, to be ſatisfied with ſuch information as thoſe experiments afford.

To prevent the neceſſity of frequent repetitions under the particular ſubjects, ſome obſervations of a general nature are here premiſed.

1. Of the collection and curation of Simples.

Vegetables ſhould be gathered chiefly from thoſe ſoils, in which they naturally delight, or in which they are found moſt commonly to riſe ſpontaneous; for, though many of them may be raiſed, and made to grow with vigour, in very different ones, their virtue generally ſuffers by the change. A variation of ſeaſons occaſions alſo differences conſiderable enough to require, oftentimes, an allowance to be made in the quantity; plants in general proving weaker, though more luxuriant, in rainy than in dry ones.—Herbs and flowers are to be gathered in a clear dry day, after the morning dew is gone off from them. Leaves, for the moſt part, are in their greateſt perfection, when come to their full growth, *juſt before the flowers appear: flowers, when moderately expanded: ſeeds, when they begin to grow dry, before they fall ſpontaneouſly: woods and barks, as is ſuppoſed, in the winter: annual roots, before the ſtalks begin to riſe: biennial roots, in the autumn of the firſt year: perennial roots, in the autumn, after the leaves have fallen, or early in the ſpring before they begin to vegetate. To moſt of theſe rules there are ſome exceptions, which are ſpecified under the particular ſubjects.*

Of the vegetables which loſe their virtue in being dried, the greater number, perhaps all, may be preſerved for a conſiderable length of time, by impeding the exhalation of their native moiſture; for ſo long as they retain this, they ſeem to retain alſo their medical activity. Thus roots have their virtue preſerved by being buried in ſand, which ſhould be dry, that they may not vegetate; leaves and flowers, of a more corruptible nature than roots, by being beaten with about thrice their weight of fine ſugar to prevent their corruption, and kept in a cloſe veſſel.

Plants which bear drying, are commonly hung in a warm airy place, defended from the ſun. The colours of herbs and flowers are for the moſt part changed or deſtroyed, in drying, by the ſun's beams; but that their medicinal virtue ſuffers a like diminution, does not appear. Thus much is certain, that a heat of culinary fire, equal to that of the ſun in ſummer, does them no injury in either reſpect: and that both flowers and leaves, when thus haſtily dried by fire, preſerve the livelineſs of their colour, and their ſmell and taſte, more perfectly than by ſlow exſiccation. The leaves of moderately juicy plants are reduced, by drying, to about one fourth of their original weight.

Some roots, and ſome other parts of vegetables, how thoroughly ſoever they have been dried, are liable, in keeping, to grow mouldy and carious. This inconvenience might probably be obviated by dipping them, when dried, in boiling ſpirit of wine, or expoſing them to its vapour in a cloſe veſſel. It is ſaid, that ſome of the oriental ſpices are made leſs periſhable, by being dipt in a mixture of lime and water.

The pulps of fruits are ſeparated from the ſeeds and membranous parts, by forcing them through a ſtrong hair ſieve. If the fruit is unripe and hard, or if it is dry, it ſhould be previouſly ſoftened by boiling in a little water; and the pulp, after paſſing through the ſieve, is to be inſpiſſated over a gentle fire, with care to prevent its burning.

The concrete gummy-reſinous juices brought from abroad, which have uſually a conſiderable mixture of bits of ſtalks, leaves, ſeeds, &c. are purified, by adding ſo much boiling water, as will ſo far ſoften or diſſolve them, that they may be preſſed, whilſt hot, through a ſtrainer; and then inſpiſſating the ſtrained liquid, in a gentle heat, to the original conſiſtence of the gummy-reſin: if the quantity of water is conſiderable, the reſinous part commonly ſeparates and ſubſides, and in this caſe is to be kept by itſelf till towards the end of the inſpiſſation of the gummy, at which time they may be eaſily united again together into an uniform maſs. Some of the gummy-reſins, expoſed to the heat of boiling water, melt thin enough, without any addition, to be preſſed through a canvas ſtrainer. In either proceſs, the operator muſt be careful to prevent, as much as poſſible, the diſſipation of the more volatile parts; an injury which cannot be wholly avoided, eſpecially when the ſubjects are diſſolved by water. The finer tears unpurified are in many caſes preferable, for internal uſe, to thoſe that have been ſtrained.

Pulverable bodies of an earthy texture, or ſuch as are brittle and not diſſoluble in water, after being reduced to a powder of moderate fineneſs, are brought to an impalpable or very ſubtile ſtate, by grinding them with a little water on ſome hard ſmooth inſtrument: the matter is commodiouſly dried on a chalk-ſtone, or rather on a cake of plaſter-of-Paris, which equally abſorbs the moiſture, without adhering to the powder, like ſubſtances of the chalky kind. Powders thus levigated are ſtill found to contain a quantity of groſs parts; which may be ſeparated by ſhaking the matter with water, till it is diffuſed through the fluid, and then ſuffering it to ſettle: the groſſer parts ſoon ſubſide; and the turbid liquor, being now poured off, depoſites more ſlowly the finer powder. By this proceſs, powders may be obtained of any degree of fineneſs; the tenuity being in proportion to the length of time that they remain ſuſpended in the fluid. On the ſame principle, the bolar earths may be ſeparated from the gritty matter naturally mixed with them, metallic bodies from thoſe of the earthy kind, and the calces of metals from metallic particles uncalcined.

Salts are purified from indiſſoluble admixtures, by ſolution in water and filtration through paper. Water diſſolves, in a boiling heat, a much larger quantity of moſt kinds of ſalts than it can retain when cold: thus, of nitre, it diſſolves when boiling near three times its own weight, but in cooling, a part of the ſalt gradually ſeparates, till at length, when grown thoroughly cold,

cold, in froſty weather, it does not retain one eighth its own weight, or one twenty-fourth of the quantity of ſalt at firſt diſſolved. The neutral ſalts, or thoſe compoſed of an acid and an alkali; ſeveral of thoſe which conſiſt of an acid and an earthy or metallic body; and many of the acid ſalts of vegetables; in this ſeparation from their ſolutions, concrete, unleſs too haſtily forced together by ſudden cooling, or diſturbed by agitation or other cauſes, into tranſparent maſſes, of regular figures peculiar to each particular kind of ſalt, and thence called cryſtals.—There are two general methods of recovering ſalts from their ſolutions in a cryſtalline form; one adapted to ſome ſalts, and the other to others. The one is, by keeping the ſolution in a gentle and equable warmth, that the water may gradually exhale, and leave the ſalt cryſtallized. The other is, by boiling down the ſolution, till, on dropping a little of it on a cold glaſs plate, cryſtalline filaments appear; then covering the veſſel, and ſuffering it to cool very ſlowly. Some of the difficultly cryſtallizable ſalts are made to ſhoot more freely, by adding, after ſufficient evaporation, a ſmall proportion of rectified ſpirit of wine, which weakens the diſſolving power of water on moſt kinds of ſaline bodies.—As different ſalts require different quantities of water to keep them ſuſpended; when two or more are diſſolved together, they begin to concrete at different periods of the evaporation, that, which requires moſt water for its diſſolution, ſhooting firſt, and leaving the more ſoluble diſſolved: on this foundation, ſalts are purified, by cryſtallization, from admixtures of one another.

2. General pharmaceutic analyſis of vegetables by inciſion and preſſure.

The medicinal juices of vegetables commonly reſide in diſtinct veſſels; and often exude upon the ſurface, from a ſpontaneous rupture, or artificial inciſions of them. The juices of herbs and trees iſſue chiefly during the ſummer heats; as the gum of the cherry-tree, the reſin of the fir, the ſweet juice of the manna aſh, and the unctuous exudations on the leaves of many plants; though ſome trees, as the birch and maple, yield early in the ſpring, on being bored or deeply wounded, a very copious ſweetiſh watery juice, of which, in ſummer, they yield little or nothing, the watery menſtruum being now perhaps conſumed. Some roots bleed gummy-reſinous juices in the ſpring, as bryony and angelica among us; others in ſummer, as the aſafetida roots in Perſia, and the ſcammony in Syria. Some fruits, particularly the ſeveral varieties of lemons, citrons, and oranges, have numerous veſicles, in *their outer rind, filled with a fragrant oil; great part of which may be extracted, by rolling the fruit on a plane ſtuck full of ſharp points, which lay open the oily veſicles, or by rubbing it on a maſs of ſugar, which imbibes the oil.*

From ſucculent herbs and fruits, the different fluid juices they contain are forced out, mixed, by bruiſing and preſſing them. Vegetables of the ſweet or ſaline kind, as the ſummer fruits and the acid herbs; ſeveral of the acrid plants, as arum and ſcurvygraſs; and thoſe of the lacteſcent kind, as dandelion and the ſpurges; generally give out by this proceſs great part of their active matter along with the watery fluid: but the juices expreſſed from aromatic herbs, as mint, have, for the moſt part, little or nothing of the peculiar ſmell, taſte, or virtue, of the ſubject; and many of the fragrant flowers, as lilies and violets, have their fragrance deſtroyed by the preſſure. The juices of plants, thick, turbid, and very impure when newly expreſſed, by ſettling and repeated ſtraining become clear: many, in this depuration, loſe nothing conſiderable of their virtue: from others, the medicinal parts, not diſſoluble in watery fluids, ſeparate and ſubſide along with the feculent matter. To the depurated juices, deſigned for keeping, a ſmall proportion of rectified ſpirit of wine may be added, which, on ſtanding for ſome time, generally throws down a freſh ſediment: the liquor is then to be put in ſmall bottles that have been waſhed with ſpirit and dried, a little ſweet oil poured on the ſurface ſo as nearly to fill the bottles, and the mouths ſlightly ſtopt: by this method, moſt of the juices that bear depuration may be preſerved, in a cool cellar, for a year or two; excepting perhaps only the very fermentable ſweet ones, which can ſcarcely be long reſtrained from fermentation without boiling. Thoſe which are not injured in their virtue by evaporation, may be inſpiſſated to the conſiſtence of a ſyrup, or of a thick or ſolid extract: from thoſe of the ſaline kind, duly depurated and inſpiſſated, the ſaline part commonly ſeparates, on long keeping, in a cryſtalline form.

The kernels of fruits, the ſeeds that on being triturated with water form an emulſion or milky liquor, and ſome other vegetable ſubſtances, yield, on being ſtrongly preſſed, an oil; which, of itſelf, is flavourleſs and inſipid; but which, in ſome caſes, is impregnated with the ſmell and taſte of the ſubject. The aromatic ſeeds and kernels, as anniſeeds and nutmegs, and ſome of the purgative ones, as the ricini, are the principal ſubſtances that give out with their oils their peculiar virtues, the oils of moſt of the others having no particular impregnation. There are, however, conſiderable differences among the *unflavoured and inſipid oils; in their conſiſtence; in their diſpoſition to congeal by cold; in their diſpoſition to grow rancid by heat; in the degree of heat neceſſary to make them boil; in their power of diſſolving certain bodies; and in their combinability with fixt alkalies into ſoap. The extraction of the oil from the ſubject is greatly facilitated by heat; and hence the preparers of theſe oils for mechanic purpoſes generally warm to a conſiderable degree either the ſubject itſelf, or the iron plates of the preſs, or both. Where the product is intended for medicinal uſe, this practice is generally condemned; heat being apt to impreſs upon the oil an ungrateful flavour, and increaſe its diſpoſition to become rancid. Neverthleſs, though a great heat has undoubtedly theſe effects, yet a gentle warmth is in ſome caſes neceſſary, and not, perhaps, very injurious in any: in winter at leaſt, both the ſubject and the apparatus may be warmed, with ſafety, to the greateſt degree of heat that obtains in the ſhade in ſummer. The heat is never to be continued longer than the expreſſion requires; and the oil, as ſoon as drawn, is to be ſet in a cold place.*

3. General pharmaceutic analyſis of vegetable and animal ſubſtances by menſtrua.

Water, the proper menſtruum of gums, of gellies, and of ſalts, extracts the gummy and ſaline parts of vegetables, and the gelatinous matter of animals. By the mediation of theſe principles, it diſſolves others of more activity, oils and reſins being made miſcible with water by the mediation of gums. All the ſubſtances which water extracts from vegetables or animals, it diſſolves almoſt unlimitedly, ſo as, by repeated infuſion on freſh parcels of the ſubjects, to become more and more impregnated with their active parts, till ſo far loaded as to have its further action impeded by the diminution of its fluidity: it generally takes up firſt the lighter and more grateful matter, and afterwards the groſſer and more diſagreeable; and hence, by ſkilful management, it may be richly impregnated with the former, without much admixture of the latter. The ſubject ſhould be moderately dried (unleſs it be of ſuch a kind as to loſe its virtue in drying) as in this ſtate it communicates a remarkably ſtronger impregnation than an equivalent quantity when freſh. Moſt leaves and flowers yield a great ſhare of their more active matter by cold maceration, or more readily by warm infuſion: by boiling, the diſſolving power of the water is for the moſt part greatly increaſed, and the volatile parts, if the ſubject contained any, are diſſipated with its ſteam.

The vapour which exhales in the boiling of odorous ſubſtances, and many of the pungent vegetables, in water, collected and cooled in proper veſſels, forms a liquor impregnated with their ſmell and pungency. This impregnation depends on a ſubtile principle, whoſe matrix is a volatile oil; of which oil a part often ſeparates in its own form, either floating on the ſurface or ſinking to the bottom according to its gravity; and which, from the ſpecific flavour of the ſubject being concentrated in it, is diſtinguiſhed by the name of eſſential. *As this ſubtile oily matter is here ſeparated from the more fixt gummy parts that rendered it before almoſt unlimitedly diſſoluble, the water now can retain only a certain proportion of it, and generally but a ſmall one: if the diſtilled water, once ſaturated ſo that a part of the oil appears diſtinct, be rediſtilled from repeated freſh quantities of the ſubject, the aqueous fluid receives no further impregnation, and the quantity of oil that ſeparates proves proportionably larger than if freſh water had been uſed. Theſe oils differ from the expreſſed ones formerly mentioned, in being diſſoluble in ſpirit of wine, and volatile in the heat of boiling water; on either of which foundations, when expreſſed oils are mixed with eſſential ones, whether artificially, or in their expreſſion from ſubjects that contain both, the two oils may be completely ſeparated from one another. The ſophiſtications of the dearer eſſential oils, commonly practiſed, by the admixture of cheaper ones, can be diſtinguiſhed only by the ſmell and taſte: the ſmell and taſte which they communicate to liquors in certain known quantities, when diſſolved in ſpirit, or, by means of ſugar or mucilages, in water, is an uſeful criterion alſo of the degree of goodneſs of the oils when genuine; for the ſame kinds of vegetables, produced in different ſoils and ſeaſons, vary not only in regard to the quantity of water they are capable of impregnating by diſtillation, and in the quantity of oil they afford, but likewiſe in the ſtrength of the oil itſelf.*

There are ſome ſubſtances whoſe virtues reſide wholly in an eſſential oil, and are wholly diſſipated in boiling: there are others, which have one virtue reſiding in an eſſential oil, and another which remains behind in the decoction, which laſt may be brought to a concentrated ſtate by evaporating the watery menſtruum with a gentle heat till the matter becomes thick or ſolid: there are others, which contain no oil, and whoſe virtue remains entire in the inſpiſſated extract, provided it has been ſkilfully prepared. A difference in the quantity of water will in many caſes occaſion a ſenſible variation in the qualities of the extract, by requiring more or leſs heat for its evaporation; for, independently of the diſſipation of the volatile parts, even thoſe of the more fixt kind ſuffer a *conſiderable change from continued heat: by long boiling with water, ſweet ſubſtances become nauſeous, and the draſtic purgatives loſe their virulence, without any remarkable ſeparation of their parts. Some have endeavoured to avail themſelves of this obſervation, for converting the ſtronger cathartics and emetics, aſarum, tobacco, and others, into medicines of ſafety and utility; and report that extracts made from theſe plants, by long boiling with a large quantity of water, were found to act as mild aperients or deobſtruents: theſe kinds of preparations, however, muſt neceſſarily be too precarious in ſtrength to be received in general practice; the abatement of the virulence of the medicine depending on what no care can adjuſt to one ſtandard, the degree and continuance of the heat.*

Pure ſpirit of wine, the appropriated diſſolvent of reſins and eſſential oils, and which diſſolves alſo certain ſaline bodies, as the ſweet ſaccharine ſalts of vegetables; extracts, for the moſt part, ſuch virtues of vegetable and animal ſubſtances, as reſide in thoſe principles, or in principles analogous to them. Of the ſubſtances, whoſe virtues reſide apparently in theſe principles, there are many, which give a ſtrong impregnation to water as well as ſpirit, but few that impart their virtues in an equal degree to the two menſtrua: from a compound of pure gum and reſin, water, by infuſion, extracts directly the gummy matter, and by the intervention of this, a part of the more active reſin, leaving great part of the reſin undiſſolved: whereas, contrariwiſe, pure ſpirit extracts directly the reſin, and leaves undiſſolved greateſt part of the inert gum, of which it does not appear to take up ſo much as water does of the reſin. Hence, in the analyſes of theſe kinds of ſubjects, it is generally obſerved that ſpirit loads itſelf with their active parts much more than water is capable of doing: that the extracts made with ſpirit are much ſmaller in quantity, and proportionably ſtronger, than the watery extracts: and that the ſpirituous tinctures, loaded with the reſinous parts, grow turbid on the admixture of water, and depoſite their pure reſin; the gummy matter, that the ſpirit had taken up, remaining diſſolved in the aqueous fluid, and being inſufficient in quantity to keep any conſiderable portion of the reſin ſuſpended. Hence ſaturated reſinous tinctures, thoſe eſpecially of the cathartic kind, require, in being diluted for exhibition, an admixture of gummy or ſaccharine matter, to keep the reſin divided, and to prevent its ſeparation: on this foundation may be prepared, from theſe kinds of tinctures, elegant gummy-reſinous extracts; by mixing with them, when inſpiſſated to the conſiſtence of a balſam, a thick ſolution of any ſimple gum or mucilage, and continuing the evaporation, with a gentle heat, till the matter *becomes dry. In like manner, the reſinous and gummy parts of one ſubject, or thoſe parts which pure ſpirit extracts, and which water extracts after ſpirit, may in ſome caſes be advantageouſly united into one maſs; by ſeparately inſpiſſating the tincture and decoction to a certain thickneſs, and then mixing them together.*

Pure ſpirit, which exhales or diſtils with a much leſs heat than water, carries off with it, for the moſt part, much leſs of the eſſential oils of vegetables. There are many ſubſtances, whoſe active parts are almoſt wholly diſſipated in the preparation of the watery extract, and almoſt wholly retained in the ſpirituous. There are ſome, however, whoſe oils are ſo volatile, as to riſe with pure ſpirit as perfectly as with water; and in this caſe, the diſtilled ſpirit proves ſometimes ſtronger than the diſtilled water; ſpirit keeping diſſolved all the oil that riſes with it; whereas, when water is uſed, a part of the oil frequently ſeparates.

Wines, as being compounds of water and inflammable ſpirit, take up ſuch parts of vegetables and animals as are ſoluble in thoſe liquors; but their diſſolving power is ſomewhat weaker than that of purer mixtures of water and ſpirit, on account partly of their viſcous unctuous matter, and partly of their acid. Wines are impregnated with the active parts of medicines, chiefly by maceration in the cold, or with a very gentle warmth; the heat, which is often advantageouſly applied for expediting or promoting the action of water and ſpirit, occaſioning in wines a diſagreeable alteration. Malt liquors are commonly medicated, by macerating the ingredients in them during the fermentation, or boiling or infuſing them in the wort.

Acids, both vegetable and mineral, ſomewhat weaken the diſſolving power both of water and ſpirit on bodies of the reſinous and oily kind; and when added to infuſions or tinctures, generally precipitate a part of what the menſtruum had before taken up: nevertheleſs, when acids are intimately combined with vinous ſpirits into what is called a dulcified liquor, the compound proves a more efficacious menſtruum, for ſome bodies, than the pure vinous ſpirit.—Fixt alkalies generally increaſe the action of water on reſinous and oily bodies, and weaken or reſtrain its action on gummy ones, rendering water incapable of holding pure gums diſſolved: they have been ſuppoſed to promote the action of ſpirit on difficultly ſoluble reſinous bodies, but though the alkali deepens the colour of the tincture, the quantity extracted is found to be the ſame without as with it.—Volatile alkalies precipitate gums from water, like the fixt, but in other caſes their effects are more variable.

Expreſſed oils extract the odoriferous, reſinous, and oily parts of vegetables; and with theſe they are ſometimes impregnated, both for the purpoſes of perfumes, and for external medicinal uſes. The more fragrant flowers give out their odour by cold maceration. The more fixt reſinous parts of the leaves of plants are extracted, by boiling them in the oil till their watery moiſture has exhaled, that is, till they are almoſt criſp, and the oil appears tinged of a green colour. Animal fats, liquefied and boiled with recent herbs, become in like manner impregnated with their reſinous parts, and with the green colour reſiding therein. It does not appear, that the oils or fats receive, by this management, any valuable virtues: the heat, requiſite for making them boil, impreſſes an ungrateful ſcent, and diſſipates the more volatile parts of the ſubject: they may be impregnated more elegantly with the active parts of vegetables, by an admixture of eſſential oils or of ſpirituous extracts. The ſpirituous tinctures of the leaves of moſt plants are of a deep green colour; and the inſpiſſated extracts, though often brown or black in their ſolid or conſiſtent ſtate, give generally a like greenneſs to freſh ſpirit, to eſſential oils, expreſſed oils and fats.

Air, or its watery moiſture, ſeems to act as a true diſſolvent, in the ſame manner, though not ſo expeditiouſly, as water in its groſſer form. The aſtringent virtue of the walnut tree, and the purgative of the damaſk roſe, have been obſerved to be diffuſed through the air; though they are obviouſly not of the volatile but of the fixt kind, not exhalable by heat but diſſoluble by menſtrua. Hence the atmoſphere may become impregnated with all thoſe virtues of vegetables, which at leaſt watery menſtrua can extract: and hence many medicinal ſubſtances are gradually robbed by it of their virtues; powders the moſt ſpeedily, as expoſing the largeſt ſurface to its action.

4. General chemical analyſis of vegetable and animal ſubſtances, and mineral bitumens, by fire.

Vegetable ſubſtances, burnt in the open air, are reſolved, partly into ſmoke, which, condenſed, forms ſoot; and partly into white aſhes, which generally give out, on being boiled in water, a fixt alkaline ſalt. Animal ſubſtances, and mineral bitumens, are reſolved in like manner into ſoot and aſhes; with this difference, that the aſhes of theſe yield rarely any alkaline matter, and that they emit in burning a different kind of ſmell.

On

On ſubmitting the ſame ſubjects to a like degree of heat in cloſe veſſels, different products are obtained. From moſt vegetables there ariſes a watery and acid liquor; a reddiſh, empyreumatic, acrimonious oil, which ſwims on its ſurface; at length, in the utmoſt degree of fire, a thicker black oil, which ſinks to the bottom; and ſometimes a little volatile alkaline ſalt: from animals, a watery and alkaline liquor, a volatile alkaline ſalt, and oils of a more fetid kind: from bitumens, an acidulous liquor, an oil approaching to the nature of petroleum, and ſometimes a concrete ſubacid ſalt: a black inſipid coal remaining in all caſes behind. About the appearance of the firſt oil, there is commonly extricated a large quantity of air, or elaſtic vapour, which, if the fire is haſtily urged, and no exit allowed it, either burſts the veſſels, or blows off the receiver.

5. Calcination of metallic bodies.

The metals (a) *called imperfect or deſtructible, as tin, lead, biſmuth, zinc, regulus of antimony, copper, and iron, on being expoſed to the joint action of fire and air, gradually loſe their metallic form, and change into a friable or powdery calx; which, urged with a ſtronger heat, either does not melt, or runs into a vitreous maſs, not miſcible with metals in their entire ſtate any more than earths and earthy glaſſes. Some emit flames in their calcination: zinc in particular burns ſtrongly and vividly: from whence it is preſumed, that an inflammable ſubſtance is one of the conſtituent principles of theſe metals, and that the loſs of their metallic form and qualities in calcination is owing to the avolation of this principle.*

The calcination is greatly promoted by the addition of nitre; which, with moſt of theſe metals, viſibly deflagrates, and is by all of them alkalized in the ſame manner as by charcoal or other inflammable ſubſtances. The calx is freed from the ſaline matter by ablution with water: a part of it commonly diſſolves in the water along with the alkalized ſalt, but either ſeparates ſpontaneouſly on ſtanding, or may be precipitated by adding any acid.

(a) The term *ſemimetal* is throughout this work avoided, as being liable to ambiguity. All the pure metallic bodies I have called by the general appellation of *metals:* ſuch of them as want malleability, are, I preſume, as properly diſtinguiſhed by the epithet *brittle* or *unmalleable,* as by a name which may be imagined to imply that one half of their ſubſtance is of an unmetallic nature, and which, in effect, has been often underſtood in this ſenſe, and accordingly applied to ores, vitriols, and metallic recrements.

A little powdered charcoal, or any other inflammable matter not partaking of a mineral acid, added to the deſtructible metals in fuſion, prevents their calcination: and the calces and glaſſes, melted with the like additions, recover the principle which they had loſt, and are revived *or* reduced; *that is, they reſume their metallic appearance, and all their former qualities. But, in order to this reduction, as calces in general melt much more difficultly than the metals themſelves, and ſome of them ſcarce at all when the fire acts on them through the ſides of a veſſel; an addition of fixt alkaline ſalt, borax, or fuſible glaſs, is generally requiſite, for bringing them into fuſion; as well as of inflammable ſubſtances, for reſtoring their metalleity.*

All the metals diſſolve in acids; ſome in one acid, and others in another: the diſſolution, like that of abſorbent earths and alkaline ſalts, is generally accompanied with an effervescence, heat, and diſcharge of vapours. In this proceſs, the phlogiſton or inflammable principle of the imperfect metals, is abſorbed or expelled: hence the vapour, which ariſes during the diſſolution in the vitriolic acid of the metals which abound with this principle, is inflammable and truly ſulphureous: and hence the metal, precipitated from the acid by alkaline ſalts, or by other bodies void of inflammable matter, is found to be a true calx, which, like the calces made by fire, cannot be revived without the introduction of freſh phlogiſton.

The perfect metals, gold, ſilver, and mercury, ſuffer no reſolution, or diſſipation of any of their principles, from any known power. If changed into the appearance of a calx, by fire or by additions, they are recoverable without loſs, either by the ſimple action of a ſtronger heat, or by the addition of ſuch ſubſtances as may barely abſorb from them the matter by which their form had been concealed.

All the WEIGHTS *and* MEASURES *mentioned in this book, are thoſe of the London Pharmacopœia:—the* troy pound, *divided into twelve ounces, the* ounce *into eight drams, the* dram *into three ſcruples, and the* ſcruple *into twenty grains:—the wine* gallon, *divided into eight pints, the* pint *into ſixteen ounces, and the* ounce *into eight drams or two ſpoonfuls.*

THE

MATERIA MEDICA.

ABIES.

FIR: an evergreen coniferous tree; with numerous, narrow, ſtiff leaves, ſtanding ſolitary, or unconnected at the baſes with one another.

1. Abies *Pharm. Pariſ.* *Abies conis ſurſum ſpectantibus ſive mas C. B.* *Pinus picea Linn.* The yew-leaved or ſilver fir; with a white bark, roundiſh-pointed leaves ſomewhat cloven at the tips, and ſhort cones ſtanding upwards: the leaves are marked on the lower ſide with three green lines and two white depreſſions.

2. Picea: *Abies picea Pharm. Pariſ.* *Picea major prima ſive abies rubra C. B.* *Pinus abies Linn.* The common, or red fir, or pitch tree; with a reddiſh bark; long ſlender quadrangular ſharp-pointed leaves, and long cones hanging downwards.

Theſe trees are natives of the northern climates: the firſt grows chiefly on dry, mountainous places; the ſecond in lower and moiſter grounds. In this kingdom, they are rarely found wild, particularly the firſt ſort: Norway, Switzerland, and ſome parts of Germany, produce both kinds in abundance.

All the parts of theſe trees contain a reſinous juice impregnated with eſſential oil; in ſmell not diſagreeable, in taſte bitteriſh and moderately pungent: from inciſions made in the trunks, one of the fineſt of the turpentines is obtained. The red fir appears to be the moſt reſinous; the ſilver fir is the moſt grateful: of both ſorts, the cones are more agreeable than the leaves, the young leaves than the old, and theſe than the wood. The leaves, though evergreen on the tree, loſe of their colour on being dried, and change in keeping to a yellow or brown.

Rectified ſpirit of wine, digeſted on the fir, diſſolves completely its active parts, along with which it takes up alſo ſome portion of the inſipid gummy or mucilaginous ſubſtance: from the freſh or new dried leaves it gains a yellowiſh green, from the cones and the wood a browniſh or yellowiſh red tincture. The filtered ſolutions, mixed largely with water, grow milky and throw off greateſt part of their reſin with its oil, which may thus be obtained in a ſtate nearly approaching to that of turpentine, the gummy ſubſtance being retained by the aqueous fluid. On committing the ſolutions to diſtillation, the ſpirit brings over with it a little of the lighter oil of the fir, ſo as to be ſenſibly impregnated with its ſmell; leaving behind an extract, different from the reſin ſeparated by water and from the native turpentines, in having an admixture of gummy matter, from which they are free.

Water, though it diſſolves little or nothing of the pure turpentines, yet, by the mediation of the gummy matter in the fir itſelf, extracts part of its reſin. In diſtillation with water, a conſiderable quantity of eſſential oil ariſes: the oil drawn from the wood is nearly ſimilar to the oil of turpentine: that obtained from the freſh cones is ſuperiour, in ſubtility and fragrance, to all the oils of the terebinthinate kind uſually met with(a). The decoction remaining after the diſtillation, inſpiſſated to the conſiſtence of an extract, retains the bitteriſhneſs, and ſome ſhare of the pungency of the fir.

Oleum templinum verum *Germanorum.*

The tops and cones of the fir tree, by virtue of their balſamic juice, tend moderately to warm and ſtrengthen the habit, and promote perſpiration and urine, and the natural ſecretions in general. Among us, they are uſed chiefly by the common people, as an ingredient in diet-drinks; in ſome parts of Europe, they are preſcribed by phyſicians in decoctions and ſpirituous tinctures; for nearly the ſame intentions as the exotic woods. Frederic Hoffman the elder relates, that in a ſcurvy which raged among the Swediſh army, during their wars with the Muſcovites, a decoction of the leaves and tops of the fir, made in water or ale, was found an effectual remedy and preſervative *(a)*. The Auguſtan college joins, to the balſam of the fir, the pungent virtues of *cochlearia*; by bruiſing the cones whilſt young, tender, and of a red colour, digeſting them for two days in four times their quantity of ſpirit of ſcurvygraſs, and then preſſing out and filtering the tincture, which is, doubtleſs, as the authors obſerve, a medicine of great efficacy. A ſpirit diſtilled from the young leaves is ſaid to be uſed in ſome places as a ſuccedaneum to Hungary water.

(a) Zimmermann, *Prælect. Chym. Neum.*

Eſſentia abietis *Phar. Auguſtan.*

3. ABIES CANADENSIS *Pharm. Pariſ. Abies minor pectinatis foliis, virginiana, conis parvis ſubrotundis Plukenet. Pinus Balſamea Linn.* Virginia or Canada fir; with roundiſh-pointed leaves, ſometimes cloven, ſtanding like the teeth of a comb in two rows on each ſide the branches, and variegated underneath with a double line of whitiſh dots.

4. BALSAMEA; *Abietis taxi foliis ſpecies odore balſami gileadenſis Raii ſuppl.* Balm-of-gilead fir; ſo called from the fragrant ſmell of the leaves when rubbed. The leaves are roundiſh-pointed, and ſlightly cloven, nearly like thoſe of the ſilver fir: the cones are long and pointed, and ſtand erect.

THESE foreign firs, now naturalized to our own climate, promiſe to be ſuperiour, for medicinal uſes, to the two preceding; their reſinous matter being of a finer and more grateful kind. From the Canada fir is extracted, in America, by wounding it during the ſummer heats, an elegant balſam, tranſparent and almoſt colourleſs, which is ſometimes brought into Europe under the name of *balſamum Canadenſe.* The balm-of-gilead fir has a more agreeable fragrance, approaching to that of the celebrated balſam from which it receives its name: a valuable reſin exudes from the cones, in conſiderable quantity; and reſins nearly of the ſame kind may be extracted by ſpirit of wine, both from the cones and from the leaves.

(a) *Clavis Schrœderian.* p. 394.

ABRO-

ABROTANUM MAS.

ABROTANUM MAS Pharm. Edinb. Abrotanum mas anguſtifolium majus C. B. Artemiſia Abrotanum Linn. SOUTHERNWOOD: a plant, with woody brittle branches; numerous greyiſh green leaves, divided into ſlender ſegments; and ſmall yellow naked diſcous flowers, hanging downwards, in cluſters, along the ſides of the ſtalks and branches. It is a native of open mountainous places, in the warmer climates: with us, it is raiſed in gardens, from ſlips or cuttings; ſeldom producing ſeeds, and not often flowers: the leaves fall off in the winter: the roots and ſtalks are perennial.

THE leaves and tops of ſouthernwood have a ſtrong ſmell, to many people agreeable; and a nauſeous penetrating bitteriſh taſte: they loſe a little by drying both of their taſte and ſmell. The flowers are ſomewhat weaker than the leaves. The cortical part of the younger roots has a light not ungrateful bitterneſs, with little or nothing of the peculiar flavour of the herb.

Infuſions of the leaves made in water are of a browniſh hue, in taſte and ſmell not unpleaſant: decoctions are darker coloured and very nauſeous. In diſtillation with water, there ariſes an eſſential oil, of a bright yellow colour, in ſmell exactly reſembling the plant. This oil diſtils ſlowly, and towards the end of the proceſs proves very foul: rectified, or diſtilled a ſecond time with freſh water, it leaves behind a conſiderable quantity of an inodorous and almoſt inſipid reſinous matter. From ſixteen pounds of the freſh leaves and tops were obtained ſcarcely three drams of oil, which left in rectification above half a dram of reſin.

Tinctures of the leaves, made in rectified ſpirit, are of a deep green colour, and taſte ſtrongly of the ſouthernwood: the ſmell is covered by the ſpirit. The ſpirit, diſtilled off from the filtered tincture, has very little of the flavour of the herb: the remaining extract retains a conſiderable ſhare of its ſmell, and reſembles it more perfectly in taſte than an extract made by water; though it is much leſs ungrateful than either that extract or the herb in ſubſtance. Rectified ſpirit appears to diſſolve the aromatic part more eaſily, and the nauſeous part more difficultly, than watery menſtrua.

This bitteriſh pungent plant has been employed as a moderately ſtimulating deobſtruent, in different cachectic diſorders; as an anthelmintic;

mintic; and as poſſeſſing ſome degree of an anodyne or antiſpaſmodic virtue depending on the oil or odorous matter. In the preſent practice, it is ſcarcely otherwiſe made uſe of than for external purpoſes, as an ingredient in diſcutient and antiſeptic fomentations; in which intention it appears to be of no inconſiderable efficacy. It has likewiſe been recommended in unguents for promoting the growth of hair; a virtue to which it does not appear to have much claim.

ABROTANUM FEMINA.

ABROTANUM FEMINA Phar. Edinb. (a) *Abrotanum femina foliis teretibus C. B. Santolina Chamæcy pariſſus Linn.* LAVENDER-COTTON: a buſhy ſhrubby plant, all over hoary; with oblong ſlender leaves, compoſed each of four rows of little knobs ſet along a middle rib; and naked diſcous yellow flowers ſtanding ſolitary on the tops of the ſtalks. It is a native of the ſouthern parts of Europe; flowers, in our gardens, from June to near the end of ſummer; and holds its leaves all the winter.

THIS plant is ſuppoſed to agree in virtue with the foregoing *abrotanum*, and to be the moſt effectual of the two in hyſteric caſes, and as an anthelmintic. It has been cuſtomary among the common people to uſe, in this laſt intention, a decoction of the leaves, made in milk; which receives from them a thick conſiſtence, and a ſtrong, though not very diſagreeable taſte.

On careful examination, the two *abrotana* appeared to differ very conſiderably in quality. The *femina* is in ſmell weaker and leſs agreeable than the *mas*; in taſte, nauſeous and acrid, but void of the penetrating bitterneſs which prevails in the other. Infuſions, tinctures, and extracts, prepared from the *femina*, are more unpleaſant than thoſe of the *mas*, though not bitter. The eſſential oils of the two plants, and of conſequence their diſtilled waters and ſpirits, approach nearer in flavour to one another, though not entirely alike.

Theſe differences, doubtleſs, affect their virtues as internal medicines. Nevertheleſs, for fomentations, which is the principal uſe that either of them is applied to in the preſent practice, they may be looked upon as very nearly alike: hence the college of phyſicians of London, under the name of *abrotanum*, allow either the *mas* or *femina* to be taken indifferently.

(a) Now expunged.

ABSINTHIUM.

WORMWOOD: a perennial plant; with hoary, divided leaves; firm woody ſtalks, which die in the winter; and ſmall yellow naked diſcous flowers, hanging downwards, like little buttons, along the ſides of the ſtalks and branches.

1. ABSINTHIUM VULGARE *Pharm. Lond. & Edinb. Abſinthium ponticum ſeu romanum officinarum ſeu dioſcoridis C. B. Artemiſia abſinthium Linn.* Common Wormwood; with large leaves, divided into ſeveral deeply indented ſegments, of a whitiſh green colour above, and whiter underneath, broader than thoſe of any other ſpecies of wormwood. It grows wild about dunghills, and on dry waſte grounds; and flowers in June or July.

THE leaves of wormwood have a ſtrong offenſive ſmell, and an intenſely bitter nauſeous taſte: the flowers ſeem to be equally bitter, but ſomewhat leſs nauſeous * *(a)*: the roots are warm and aromatic, without any thing of the bitterneſs or offenſiveneſs which prevail in the other parts of the plant. The leaves loſe a part of their ill ſmell, on being dried and kept for ſome time.

Wormwood leaves give out nearly the whole of their ſmell and taſte both to aqueous and to ſpirituous menſtrua. The watery infuſions, prepared without heat, are the leaſt ungrateful. The colour of the infuſions made in cold water is a pale brown, in warm water a ſooty brown, in proof ſpirit yellowiſh. Rectified ſpirit gains from the freſh leaves a beautiful green, from the dry a reddiſh or brown tincture.

Rectified ſpirit elevates little from this plant in diſtillation: water brings over nearly the whole of its ſmell and flavour. Along with the aqueous fluid, there ariſes an eſſential oil, which ſmells ſtrongly and taſtes nauſeouſly of the wormwood, though not bitter. The oil drawn

Oleum abſinthii *Pharm. Lond. & Edin.*

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* *(a)* The Edinburgh college, in their laſt edition, direct a tincture of the dried flowering tops of wormwood, in the proportion of ſix ounces to a quart of rectified ſpirit, under the title of *Tinctura Abſinthii.*

from the freſh herb is commonly of a dark green; from the dry, of a deep yellowiſh brown colour. The quantity of oil varies greatly, according to the ſoil and ſeaſon, in which the wormwood is produced: in ſome years, ten pounds have afforded upwards of two ounces; in others, twenty pounds have yielded little more than one ounce. Geoffroy obſerves, that it is in rainy ſeaſons, and moiſt ſoils, that it yields the moſt oil; that in dry years the oil is accompanied with a reſinous matter, and proves of a fine green colour; and that in wet ones it is leſs reſinous, and not green *(a)*.

A decoction of wormwood in water, long boiled, and inſpiſſated to the conſiſtence of an extract, loſes the diſtinguiſhing ſmell and ill flavour of the plant, but retains its bitterneſs almoſt entire. An extract made with rectified ſpirit contains, along with the bitter, nearly the whole of the nauſeous part; water carrying off, in the evaporation, all the oil, in which the offenſive flavour reſides, while pure ſpirit elevates very little of it. The watery extract gives out its ſimple bitterneſs, not only to water again, but to rectified ſpirit.

Extractum abſinthii *Ph. Edinb.*

WORMWOOD is a moderately warm ſtomachic and corroborant: for theſe intentions, it was formerly in common uſe, but has now given place to bitters of a leſs ungrateful kind. The above experiments, however, point out a method of obtaining from this plant a bitter ſufficiently elegant, of little or no particular flavour, and this either in a ſolid form, or in that of a watery or ſpirituous ſolution.

The eſſential oil is ſometimes given, in doſes of a drop or two, properly diluted by ſolution in ſpirit of wine, as a mild antiſpaſmodic. Its more frequent uſe is as a vermifuge, for which purpoſe, it is both applied to the belly, and taken in pills made up with crumb of bread: the ſpirituous extract, however, promiſes to be, in this intention, preferable to the pure oil; as it contains, along with the oil, all the bitter matter of the wormwood.

This plant very powerfully reſiſts putrefaction, and hence is made a principal ingredient in antiſeptic fomentations.

Boerhaave commends, in tertian agues, a medicated liquor, prepared by grinding about ſeven grains of the oil of wormwood with a dram of

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(a) Geoffroy, *Mem. de l'acad. royale des ſcienc. de Paris, pour l'ann.* 1721.

ſugar, and two drams of the alkaline ſalt extracted from the aſhes of wormwood; and afterwards diſſolving the compound in ſix ounces of the diſtilled water of the plant. Two hours before the fit is expected, the patient is to bathe his feet and legs in warm water, and then drink half an ounce of the liquor every quarter of an hour till the two hours are expired: by this means, he ſays, caſes of this kind are generally cured with eaſe and ſafety, provided there is no ſcirrhoſity or ſuppuration *(a)*. The medicine is, doubtleſs, a very ſerviceable aperient, where obſtructions of the viſcera prohibit the immediate uſe of bark, and in ſuch obſtructions as the imprudent uſe of aſtringents has given riſe to. Its virtues might be improved by an addition of the bitter watery extract; though the compound, thus laboriouſly prepared, would not be at all ſuperiour to a ſimple infuſion of the plant, in pure water, impregnated with a due proportion of fixt alkaline ſalt.

The roots of wormwood, though not hitherto, that I know of, introduced into medicine, promiſe to be applicable to ſome uſeful purpoſes; being moderately warm and aromatic, of a flavour ſufficiently grateful, and remarkably durable in the mouth. Their virtue reſides chiefly in the cortical part, the interiour woody matter being nearly inſipid. Rectified ſpirit extracts their flavour, more perfectly than watery liquors. The ſpirituous tincture is of a reddiſh brown colour: inſpiſſated, it yields an extract more grateful than the root in ſubſtance.

2. ABSINTHIUM MARITIMUM *noſtratibus romanum falſò dictum Pharm. Lond. Artemiſia maritima Linn.* Sea-wormwood, falſely called in our markets Roman wormwood; with finely divided leaves, hoary all over. It grows plentifully about our ſalt marſhes, and in ſeveral parts on the ſea coaſt.

THIS ſpecies is in taſte and ſmell conſiderably leſs unpleaſant than the common wormwood; and hence is preferred by the college as an ingredient in ſome of the diſtilled waters. Even the eſſential oil, which contains the whole of its flavour concentrated, is ſomewhat leſs ungrateful; and the watery extract, ſomewhat leſs bitter, than thoſe of the common wormwood. Its virtues are the ſame, differing only in degree;

(a) Boerhaave, *Elementa Chemiæ, proceſſus* 39.

it is leſs effectual as an antiſeptic and anthelmintic, on account of its being weaker; and more eligible as a ſtomachic, on account of its being leſs offenſive. A conſerve of the tops, made by beating them with thrice their weight of fine ſugar, is kept in the ſhops.

Conſerva ſummitat. abſinth. maritimi *Pharm. Lond.*

3. Absinthium minus *Pharm. Pariſ.* *Abſinthium ponticum tenuifolium incanum C. B.* *Artemiſia pontica Linn.* Roman wormwood; with more numerous, more finely divided, darker coloured leaves, hoary only underneath. This is a foreign ſpecies, but as hardy, and as eaſily raiſed, as the others: the roots quickly ſpread, and ſend up abundance of new plants. Sea wormwood has been often ſold for it in the markets, though the difference betwixt the two, above pointed out, is very obvious on ſight.

Roman wormwood is conſiderably leſs ungrateful than either of the two foregoing: its ſmell is weaker, and not unpleaſant; and its bitterneſs is mixed with a kind of aromatic flavour, ſo as ſcarce to be diſagreeable. It appears to be the moſt eligible of the three as a ſtomachic and corroborant; in which intention, a conſerve of the tops has been greatly recommended, and is undoubtedly an elegant and uſeful preparation.

4. Absinthium Alpinum *Pharm. Pariſ.* *Abſinthium alpinum candidum humile C. B.* *Artemiſia glacialis Linn.* Mountain wormwood: procumbent, fine leaved, and covered with a gloſſy ſilk-like down *(a)*.

5. Absinthium Valesiacum: *Abſinthium ſeriphium montanum candidum C. B.* *Herba alba Dod.* Mountain wormwood of Valais: erect, fine leaved, and covered with a cotton-like down: the leaves are curled about the edges, ſo as to appear, with their down, pulpy and of an oblong rounded figure *(a)*.

Haller informs us, that the firſt of theſe plants is frequent in ſtony grounds on the Alps, and the ſecond by the ſides of ſandy roads in the territory of Valais in Switzerland; that the former is bitteriſh, aromatic,

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(a) Haller, *Stirp. Helvetic. p.* 695: *Artemiſia* 2 & 3.

of great eſtimation among the inhabitants of the Alps, the common remedy againſt the intermitting fevers which often rage there, and for exciting the menſtrual diſcharges, to which the ſudden colds of thoſe countries give frequent checks: that the latter has an acrid aromatic ſmell and taſte, without bitterneſs, and promiſes, from its ſenſible qualities, to be a plant of great virtues. They have not yet been introduced into practice in this country.

ACACIA.

ACACIA Pharm. Lond. Acacia vera Ægyptiaca. ACACIA: a ſubaſtringent gummy ſubſtance, uſually of a firm conſiſtence, but not very dry; brought from Egypt, in roundiſh maſſes, wrapt up in thin bladders, from four to eight ounces in weight; outwardly of a deep brown colour inclining to black, inwardly of a reddiſh or yellowiſh brown; prepared by inſpiſſating, to a due conſiſtence, the juice expreſſed from the unripe pods of a large prickly tree called by Caſpar Bauhine *acacia foliis ſcorpioidis leguminoſæ:* the *Mimoſa nilotica* of Linnæus.

ACACIA has no manifeſt ſmell. Applied to the tongue, it quickly ſoftens, and diſcovers a moderately rough not ungrateful taſte, which is followed by a kind of ſweetiſhneſs. It diſſolves totally in water, except the impurities, which, in the ſpecimens I examined, amounted to a conſiderable quantity. Proof ſpirit diſſolves a part: rectified ſpirit extracts from it little or nothing. This juice appears therefore to be truly of the gummy kind; and to differ eſſentially, in its nature and pharmaceutic properties, from the generality both of aſtringent juices, as hypociſtis and terra japonica, and of aſtringent vegetables in ſubſtance, as biſtort and tormentil roots, whoſe ſtyptic matter is extracted by ſpirit of wine as well as water.

This mild gummy aſtringent may be given to advantage in diſorders ariſing from laxity and acrimony, as habitual diarrhœas, uterine fluors, and catarrhal coughs. It is uſed by the Egyptians againſt ſpittings of blood, in doſes of a dram; and employed in collyria for ſtrengthening the eyes, in gargariſms for quinſeys, and in glyſters for diarrhœas *(a)*.

(a) Alpinus, *de plant. Ægypt. cap.* 4. & *de medicina Ægyptior. lib.* iv. *cap.* 14.

Among us, it is ſcarcely otherwiſe made uſe of than as an ingredient in mithridate and theriaca.

ACANTHUS.

ACANTHUS Pharm. Pariſ. Branca-urſina: Acanthus ſativus vel mollis virgilii C. B. Acanthus mollis Linn. BRANKURSINE or BEARS-BREECH: a plant with large, elegantly ſinuated, ſoft leaves; among which ariſes a ſingle ſtalk, bearing a long ſpike of irregular monopetalous labiated fleſh-coloured flowers, the upper lip of each of which is wanting, the ſtamina ſtanding in its place. This plant is a native of moiſt warm ſoils in the ſouthern parts of Europe, and cultivated with us in gardens. It is perennial, and flowers in June and July.

THE roots and leaves of brankurſine abound with a ſoft, inſipid, mucilaginous ſubſtance; which is readily extracted by coction or infuſion in water, and remains entire upon evaporating the liquid. The roots are the moſt mucilaginous; and the mucilage, obtained from them, is the moſt viſcous and tenacious.

Rectified ſpirit, digeſted on the leaves, extracts from them a fine deep green tincture; which, as the editor of the Wirtemberg pharmacopœia obſerves, is more durable than the green communicated to ſpirit by other herbs. The menſtruum receives no particular taſte or flavour from the plant.

Brankurſine has long been a ſtranger to practice in this country. In thoſe places where it is common, it is employed for the ſame purpoſes, to which the althea and other mucilaginous vegetables are applied among us.

ACER.

ACER MAJUS: Acer montanum candidum C. B. Acer Pſeudo-Platanus Linn. GREAT MAPLE, improperly called SYCAMORE: a large tree, with pentangular ſerrated leaves; producing ſmall greeniſh flowers, and a fruit compoſed of two capſules, including each a whitiſh ſeed at the end where they are joined, and ſpreading at the oppoſite end into a membranous wing. It is a native of the mountains of Switzerland and Auſtria, and now common in England.

All the parts of the maple contain a ſweet ſaccharine juice; which, exuding on the ſurface of the leaves, renders them ſubject to be preyed on by inſects. The roots, trunk, or branches, wounded early in the ſpring, bleed a large quantity of clear liquor; which, in its dilute ſtate, taſtes ſomewhat ſweetiſh; and being inſpiſſated, yields a brown coloured concrete ſugar, with a ſyrupy matter reſembling melaſſes.

The juice, unboiled, has been drank as an antiſcorbutic. The ſugar and melaſſes, which are ſaid to be leſs ſweet than thoſe extracted from the ſugar cane, and their ſweetneſs to be likewiſe ſomewhat different in kind *(a)*, are ſuppoſed to be more medicinal in diſorders of the breaſt. Conſiderable quantities of this ſugar, made from a ſpecies of maple in Canada, are imported for that uſe into ſome parts of Europe, particularly France: the ſamples which I have ſeen of it are of a brown colour, and of a more grateful ſweetneſs than the common brown ſugars.

Saccharum Canadenſe *Ph. Pariſ.*

ACETOSA.

ACETOSA, Lapathum acetoſum, Rumex. Sorrel or Sour-dock: a ſpecies of dock with acid leaves.

1. Acetosa vulgaris, Oxalis, *Pharm. Edinb. Acetoſa pratenſis C. B. Rumex acetoſa Linn.* Common Sorrel; with the leaves ſhaped like an arrow-head, and very ſhort or no ears at the bottoms.

2. Acetosa arvensis, *minor: Acetoſa arvenſis lanceolata C. B. Rumex Acetoſella Linn.* Sheeps Sorrel; with arrow-headed leaves, of which thoſe on the ſtalk have no ears, thoſe from the root long diverging ones.

3. Acetosa *rotunda, P. Pariſ. Acetoſa hortenſis rotundifolia C. B. Rumex ſcutatus Linn.* Garden or French ſorrel; with roundiſh leaves and ears.

The leaves of theſe plants are mildly acid, without any ſmell or particular flavour: the common ſorrel is the leaſt, the garden ſort the moſt agreeable.

(a) Kalm, *Suenſka vetenſkaps academ. handlingar,* 1751.

agreeable. They were all formerly directed as officinals; and occaſionally made uſe of, for abating heat, quenching thirſt, and preventing or correcting a tendency to putrefaction, in febrile and ſcorbutic diſorders; but at preſent are leſs regarded, other vegetable acids having in good meaſure ſupplied their place.

The leaves yield, upon expreſſion, a large proportion of thick, turbid, green-coloured juice: which, on ſtanding till the feces have ſubſided, becomes clear and reddiſh, and in taſte more gratefully acid than the herbs in ſubſtance. This is one of the moſt elegant preparations of ſorrel for medicinal uſe, and may be advantageouſly joined, in ſcorbutic caſes, to the juices of the acrid herbs: the inhabitants of Greenland, who are very ſubject to theſe diſtempers, are ſaid to employ, with good ſucceſs, a mixture of ſorrel and *cochlearia (a)*.

Greateſt part of the acid matter of ſorrel may be obtained alſo in the form of a concrete ſalt; by inſpiſſating the depurated juice to a due conſiſtence, and ſetting it to cryſtallize. This ſalt is ſuppoſed to approach to the nature of tartar: from which, however, it obviouſly differs, in being more acid, more eaſily diſſoluble in water *(b)*, and much leſs, if at all, purgative.

The roots of the ſorrels have a roughiſh bitteriſh taſte, without any acidity. They have been looked upon as aperient and diuretic; and, in theſe intentions, have been ſometimes made ingredients in watery infuſions and decoctions, to which they communicate a reddiſh hue: the garden ſorrel gives the lighteſt, the common wild ſort the deepeſt red. It is obſervable, that acid liquors, which in general heighten vegetable reds, deſtroy this red tincture of ſorrel roots: alkalies change it to a purpliſh; chalybeate ſolutions, to a deep green.

The ſeeds of ſorrel are very ſlightly, if at all, aſtringent, without acidity or bitterneſs. They had long a place in the ſhops, as ingredients in ſome of the old alexeterial compoſitions, from which they are now deſervedly expunged.

ACETUM.

ACETUM Pharm. Lond. & Edinb. VINEGAR: a vegetable acid liquor, produced by fermentation; either directly from fermentable juices or infuſions; or from ſuch as have been previouſly fermented into a vinous ſtate. The more ſpirituous the wine, the more acid is the vinegar.

(a) Bartholinus, *Act. Haffnienſ.* 1671. *obſ.* 9.

(b) Neumann, *Chemical works, p.* 257, 424.

Acetum diſtillatum *Ph. Lond.&Edin.*

VINEGAR is not a pure or ſimple acid, like thoſe of the mineral kingdom: in open veſſels, it grows vapid, ropy, and putrid, while the mineral acids remain unchanged. Diſtilled by a moderate heat, not exceeding that of boiling water, it yields firſt a phlegmatic liquor, afterwards a ſlightly acid one, which is ſucceeded by ſtronger and ſtronger acids; till the matter in the diſtilling veſſel becomes thick and unctuous, like honey: the vinegar prepared from malt liquors contains more of this viſcous ſubſtance than that of wine, and hence is more diſpoſed to become ropy and ſlimy in keeping. This reſiduum, urged with a ſtronger fire, gives over an empyreumatic oil, and a penetrating acid ſpirit tainted with the ill ſmell and yellow colour of the oil. There now remains a black coal, which, burnt into white aſhes, yields a conſiderable proportion of fixt alkaline ſalt.

Pure fixt alkaline ſalt, ſaturated with the colourleſs diſtilled liquors, and afterwards exſiccated, contracts a yellowiſh or brown tinge; and thus betrays, that the acid ſtill retains a portion of the oil. On gently melting the dry ſalt, the oily matter burns to a black coal, which ſeparates on diſſolution in water: the ſolution exhaled to dryneſs, leaves a perfectly white neutral ſalt, containing the pure acetous acid combined with the alkali. On adding to this compound a little oil of vitriol, the acetous acid is diſengaged, and may now be collected by diſtillation, in a highly concentrated ſtate, and of a very pungent volatile ſmell.

The quantity of fixt alkaline ſalt, which vinegar is capable of ſaturating, is one of the ſureſt criterions of its ſtrength. The beſt of the German vinegars, according to Stahl, ſaturate little more than one fortieth of their own weight; the French vinegars, examined by Geoffroy, above one thirty-fifth, and ſome of them no leſs than one twelfth; the common diſtilled vinegar of our ſhops about one twentieth *(a)*. By congelation,

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(a) It cannot be affirmed that the ſtrengths of the ſeveral vinegars examined were exactly in the proportion of the above numbers, as the alkaline ſalt, uſed by different perſons or at different times, may have differed in purity or dryneſs, and as the common way of judging of the ſaturation is too vague for determining the quantity to any degree of nicety. For all trials of this kind, whether with vinegar or other acids, the alkaline ſalt (that of tartar is the moſt eligible) ſhould be previouſly melted, that all remains of watery moiſture may be expelled from it; and the ſaturation ſhould be determined by means of coloured papers, as mentioned at the end of this article.

gelation, and by diſtillation from alkalies, as above-mentioned, and from ſome metallic bodies, particularly copper, the acid may be ſo far concentrated as to ſaturate near equal its own weight; a greater degree of ſtrength, than even the mineral acid ſpirit of ſea ſalt can eaſily be brought to.

The acetous acid, however purified or concentrated, differs eſſentially from all the others: — from the native vegetable acids, in ſubtility and volatility; not being obtainable in the form of a concrete ſalt, which moſt, perhaps all, of the native ones are; and riſing in diſtillation with a moderate heat, which very few of the native ones have been found to do; moſt of the acid juices giving over, in the heat of boiling water, only their aqueous fluid, and having greateſt part of their acidity deſtroyed by a ſtronger heat: — from the mineral acids, in its habitude to different bodies, and the nature of the compounds which it forms with them: thus, whatever alkaline, earthy, or metallic ſubſtance, the acetous acid be combined with, the addition of any mineral acid will disjoin them, the mineral taking the place of the acetous: neutral ſalts, compoſed of the acetous acid and fixt alkalies, diſſolve, totally and plentifully, in rectified ſpirit of wine, whilſt thoſe, compoſed of the ſame alkalies and mineral acids, are not at all ſoluble in that menſtruum: in this property, the acetous acid differs alſo from moſt, perhaps from all, of the acids of its own kingdom: — and from all acids in general, in its peculiar odour.

Vinegar diſſolves the elixated aſhes of vegetables, at leaſt in great part; animal earths, purified by incineration, or when naturally blended with but little gelatinous matter, as in ſhells; the earth of alum; and the mineral calcareous earths. — The ſolubility of calcareous earth in the acetous acid, and its precipitability by that of vitriol, afford a ready method of diſcovering the ſophiſtication of vinegar, ſaid to be ſometimes practiſed, with vitriolic acid. If a ſaturated ſolution of any calcareous earth, as chalk, made in ſtrong vinegar, be added to ſuch as is ſuſpected of containing vitriolic acid, no change will enſue if the vinegar was pure; but if it contained even a minute portion of that acid, the mixture will immediately become milky, and on ſtanding for a little time depoſite a white ſediment: if the calcareous ſolution be gradually dropt in, ſo long as it produces any milkineſs or cloudineſs, all the vitriolic acid will be abſorbed by the chalk, and as this new compound is exceeding ſparingly diſſoluble, nearly the whole of it will precipitate, ſo as to leave the vinegar almoſt pure.

It diſſolves, among metallic bodies, zinc, iron, copper, tin, lead, biſmuth, and regulus of antimony; the two laſt in very ſmall quantity, but ſufficient to give a ſtrong impregnation to the vinegar. It diſſolves lead more eaſily when reduced into a calx, than in its metallic ſtate: boiled even with the glaſs of lead, or in the common glazed earthen veſſels, in the glazing of which this metal is a principal ingredient, it extracts ſo much as to become ſtrongly tainted with the pernicious qualities of the lead.

It diſſolves the vegetable inſpiſſated juices, and ſeveral of the gummy reſins, and extracts the virtues of ſundry plants in tolerable perfection; but at the ſame time its acidity makes a notable alteration in them, or ſuperadds a virtue of a different kind. Some drugs, however, for particular purpoſes, it excellently aſſiſts or coincides with, as garlic, ſquills, ammoniacum: and in many caſes, where this acid itſelf is principally depended on, it may be advantageouſly impregnated with the flavour of certain vegetables: moſt of the odoriferous flowers impart to it their fragrance; and the blue, bright red, and ſome others, tinge it at the ſame time of a fine purpliſh or red colour.

It unites, like the mineral acids, with rectified ſpirit of wine, into what is called a dulcified liquor, provided the vinegar has been highly concentrated. On diſtilling the mixture with a boiling heat, a large proportion of a ſubtile fluid is obtained, ſimilar in its general properties to the æther prepared with the other acids *(a)*.

It mingles equally with blood and its ſerum, and with moſt of the fluids of animals; not thickening or coagulating them, like the acids of the mineral kingdom; but tending rather, as Boerhaave juſtly obſerves, to attenuate and reſolve coagulations. It is likewiſe, when taken internally, leſs ſtimulating than the mineral acids, and leſs diſpoſed to affect the kidneys * *(b)*.

THIS mild unctuous acid is a medicine of great uſe in the different kinds of inflammatory and putrid diſtempers, both internal and external.

(a) M. le Compte de Lauraguais, *Hiſt. Acad. Par.* 1759.

* *(b)* It is leſs liable to undergo changes in the firſt paſſages than the native vegetable acids, which have yet to go through the proceſs of fermentation. *Cullen.*

It is one of the moſt certain antiphlogiſtics and ſudorifics in high fevers, and one of the beſt preſervatives againſt peſtilential and other putredinous contagions. Fainting, vomiting, lethargic and hyſteric paroxyſms, are likewiſe frequently relieved, by vinegar, applied to the mouth and noſe, or received into the ſtomach: lethargic perſons are often found to be excited more effectually by vinegar blown into the noſe, than by the far more pungent volatile ſpirits. Boerhaave obſerves, that this acid counteracts, in a peculiar manner, the effects of ſpirituous liquors.

The daily uſe of vinegar, with food, is ſalutary in hot bilious diſpoſitions, and where there is a tendency to inflammation or putrefaction. It is prejudicial to children, to aged, hyſterical, and hypochondriacal perſons, in cold pale phlegmatic habits, where the veſſels are lax, the circulation languid, and the power of digeſtion weak. It tends in all caſes, if uſed freely, to prevent corpulence; Hoffman *(a)* ſuſpects that it produces this effect by impeding the formation of chyle, or deſtroying the union of the unctuous and ſerous fluids of which chyle is compoſed; an effect common to all acids, as appears from their coagulating milk and artificial emulſions. I have known great corpulence reduced by the liberal uſe of vinegar, which is the acid commonly employed for this purpoſe, but not with impunity; diſeaſes ſucceeding, which eluded the power of medicines, and proved at length fatal.

Combinations of vinegar with different earthy bodies differ in virtue according to the nature of the earth. A ſolution of the aluminous earth in this acid is ſtrongly ſtyptic; of vegetable earths, or magneſia alba, bitteriſh and gently purgative: both theſe ſolutions are milder, and leſs ungrateful, than thoſe of the ſame earths made in the mineral acids, and though as yet unknown in practice, certainly deſerve to be introduced. Solutions of different animal and the calcareous mineral earths are bitteriſh and ſubauſtere, in various degrees; and ſuppoſed to act as mild reſolvents, ſubaſtringents, or diaphoretics.

Combinations of vinegar with fixt alkaline ſalts, are uſeful aperients, diuretics, and cathartics. I have known two drams of the alkali, diſſolved in as much vinegar as was ſufficient to ſaturate it, occaſion ten or twelve copious watery ſtools, and a plentiful diſcharge of urine, without griping or fatiguing the patient. Mixtures of alkali and diſtilled vinegar, evaporated to a dry ſalt, are kept in the ſhops; either in a browniſh oily ſtate, as obtained by ſimple evaporation*; or purified to perfect whiteneſs, by gentle fuſion and ſolution in water †: theſe preparations are given in doſes of ten or twenty grains as mild aperients, and to a dram or two as purgatives and diuretics.

(a) *Philoſophia corp. human. morboſi, par.* iii. *cap.* 3. §. 7.

* Tartarus regeneratus *Phar. Edinb.*

† Sal diureticus *Phar. Lond.* Terra foliata tartari, & arcanum tartari, *vulgo.*

It is difficult, in the common way of managing the proceſs, to hit the exact point of ſaturation between the acid and the alkali. After fourteen parts of diſtilled vinegar have been gradually poured upon one part of the ſalt, the addition of a little more of the acid will occaſion no further efferveſcence while the mixture is cold; but if well heated and ſtirred, the efferveſcence begins again, and continues till four or five parts of freſh acid have been added: on exhaling the aqueous fluid, the remaining dry ſalt will generally ſtill raiſe an efferveſcence with freſh vinegar, and require two or three parts more of the acid to render it completely neutral. There is, therefore, this advantage, in reducing the ſalt to a dry form, that the perfect neutralization is obtained with greater certainty than when the ingredients are barely mixed together. The purification of the dry ſalt, or ſeparation of its oil, is intended to render it fitter for weak ſtomachs, on which it would not ſit ſo eaſily in its common impure ſtate; though the medicine, thus purified, is in ſome particular caſes leſs to be depended upon than the oily ſalt. It may be obſerved, that the imperfection of the oily ſalt, which the purification is deſigned to remedy, does not depend upon the oil as ſuch, but on its receiving ſome degree of burnt taint from the too ſtrong heat commonly employed in the evaporation, and may therefore be effectually prevented by the prudent uſe of a water-bath.

Combinations of vinegar with volatile alkaline ſalts, commonly made with diſtilled vinegar added gradually to the ſalt till the efferveſcence ceaſes, ſcarcely yield any ſolid ſalt, the ſaline matter evaporating with the watery fluid, or even before it: on diſtilling the mixture in a retort, a ſalt ſometimes concretes about the ſides of the receiver, but liquefies again as the veſſels grow cold. Theſe mixtures have little purgative virtue, but operate powerfully as aperients; by urine, if the patient walks about in the cool air; by perſpiration or ſweat, if kept warm in bed. They are principally made uſe of in this laſt intention, in doſes of half an ounce: and as they act without irritation, they have place in inflammatory caſes, where the warm ſudorifics, if they fail of exciting a ſweat, aggravate the diſtemper.

Spiritus Mindereri *Ph. Edinb.*

Great care ought to be taken in the neutralization of this liquor, which is very difficult to be hit exactly by the common method. The beſt way of judging of the ſaturation is, by trying the liquor from time to time with certain coloured vegetables juices, or on paper ſtained with them. A thick writing paper may be ſtained pale blue on one ſide with the blue preparation of archil commonly called lacmus; and pale red on the other ſide by a mixture of the ſame infuſion with ſo much dilute ſpirit of ſalt as is juſt ſufficient to redden it. If a ſmall ſlip of this paper be dipt occaſionally into the liquor to be tried, or a drop of the liquor applied upon both ſides of the paper; the red ſide turns blue ſo long as any of the alkali remains unſaturated; the blue ſide turns red when the acid begins to prevail; and no change at all is produced when the ſaturation is complete. This way of trial I ſtrongly recommend to the apothecary in making all neutral mixtures, as he may thus at all times find, expeditiouſly and with certainty, the exact point of neutralization, which is not perhaps poſſible to be found by the common way of judging from the effervеſcence: how precarious and indeterminate a mark the ceſſation of effervеſcence is, is apparent from the obſervations on the preceding preparation. Where lacmus cannot be procured, the paper may be coloured with the juices of certain blue flowers, as violets, iris, cyanus, &c. or with the blue juice preſſed out from ſcrapings of the cortical part of common radiſh roots: with theſe juices it is ſufficient to ſtain the paper on one ſide, this one colour diſcovering both acidity and alkaleſcence, the former changing it red, and the latter green; but the change produced by liquors ſlightly alkaline is much leſs conſpicuous than that produced by the ſame liquors on the red paper above-mentioned, which is therefore to be preferred.

ADIANTHUM.

MAIDENHAIR: an evergreen plant; with ſlender, ſmooth, ſhining blackiſh ſtalks; producing no manifeſt flower. The ſeeds are a fine duſt, lying in roundiſh ſpecks, about the edges of the backs of the leaves, which curl over and cover them.

1. ADIANTUM *Pharm. Pariſ.* *Adianthum verum.* *Capillus veneris: Adianthum folio coriandri C. B.* *Adiantum capillus veneris Linn.* True

maidenhair: about half a foot high, with ſeveral pinnæ of little roundiſh ſinuated or nearly triangular leaves towards the tops of the ſtalks.

2. Adiantum Canadense *Pharm. Pariſ.* *Adianthum fruticoſum brazilianum C. B.* *Adiantum pedatum Linn.* Canada maidenhair: larger, with ſpreading branches.

The firſt ſort grows wild in Italy and the ſouthern parts of France, from whence the dry leaves are ſometimes brought to us. The ſecond, a native of America, is cultivated in ſome of our gardens.

The leaves of both the maidenhairs have a ſlight ſweetiſh roughiſh taſte, and a pleaſant but weak ſmell, very perceptible when boiling water is poured on them. They readily give out to the water the whole of their ſmell, taſte, and medicinal virtue: the infuſions are not ungrateful; particularly that of the Canada ſort, whoſe flavour is both pleaſanter and ſtronger than that of the other. Infuſions or decoctions of them, inſpiſſated, yield a moderately rough, bitteriſh, mucilaginous extract. Rectified ſpirit of wine takes up their taſte and flavour, and gains from them a deep green colour, but diſſolves little of the mucilaginous ſubſtance, in which a conſiderable part of their virtue conſiſts: the extract, obtained by inſpiſſating the tincture, is leſs in quantity, and ſtronger in taſte, than that made with water.

Maidenhair has long been held in eſteem againſt diſorders of the breaſt; for promoting expectoration, ſoftening recent coughs, and allaying the tickling in the throat occaſioned by defluctions of thin rheum. For theſe purpoſes, a ſyrup of the true ſort, flavoured with a little orange-flower water, has been uſually brought from France; and a ſyrup of the Canada ſort, made with maple ſugar, is ſometimes received from America. The virtue of the maidenhair is obtainable, however, to much better advantage, by drinking an infuſion of the herb as tea, ſweetened either with ſugar, or by the addition of a little liquorice. The Engliſh maidenhair has been commonly ſubſtituted in the pectoral ſyrups and infuſions made among us: the Canada ſpecies, which appears to be ſuperiour to both, is ſaid to have been long made uſe of in France, and has lately been introduced into practice in this country.

* *AER FIXUS.*

IT is not here intended to give a chemical account of the different kinds of air. It is well known to all, in any degree converſant with the ſubject, that beſides the air which we breathe, there have been diſcovered other ſpecies of permanently elaſtic inviſible fluids, poſſeſſing very different properties. Of theſe, one of the beſt known, and the only one as yet applied to medical purpoſes, is the *Fixed*, *Fixable*, or *Mephitic Air*, or *Gas*.

THIS kind of air is naturally contained in a great variety of ſubſtances; and is ſet free in many proceſſes of art. Every kind of vinous fermentation extricates a large quantity of it, which floats on the ſurface of the fermenting liquor. It is expelled from alkaline ſalts, and from abſorbent earths, by the action of fire, and of acids. The properties by which it is principally diſtinguiſhed, are, its extinguiſhing flame, being deſtructive to animal life when inſpired pure and in large quantity, and being readily abſorbed by water, to which it gives a ſlightly acid taſte, accompanied with a degree of briſkneſs and ſpirit. It has the general properties of a weak acid, of a very volatile nature.

The idea of its medical virtues ſeems to have ariſen chiefly from ſome experiments of its great antiſeptic power when applied pure; and from the diſcovery of its preſence in large proportion in ſome of the moſt celebrated mineral waters, and alſo in other ſubſtances very efficacious in the cure of particular diſeaſes.

At preſent, fixed air is conſiderably employed in medicine, chiefly in the following ways.

The celebrated antiemetic mixture of Riverius, compoſed of a ſpoonful of lemon juice and a ſcruple of ſalt of wormwood taken in the act of effervefcence, is ſuppoſed to owe its efficacy chiefly to this principle, which is ſet free during the combination. On this foundation, its uſe is extended to many diſeaſes in which a tendency to putridity is ſuſpected. Any other acid may be ſubſtituted with equal advantage as far as the fixed air is concerned.

By various contrivances, the air expelled from an abſorbent earth by the addition of an acid is received into water, in which it diſſolves, communicating to the liquor the qualities above-mentioned. This becomes a very grateful beverage in fevers and putreſcent diſeaſes, being cooling, antiſeptic, and at the ſame time cauſing a temporary glow in the ſtomach. It ſhould frequently be made freſh, and kept well corked, as the aerial ſpirit very readily flies off again from the water. As fixed air is in reality an acid, water impregnated with it may be neutralized by an alkali, thus forming an agreeable neutral julep, which is found to be an uſeful refrigerant and diuretic. If a few clean iron filings are thrown into water to be impregnated with fixed air, ſo much of the iron is diſſolved by its means, as to produce an artificial chalybeate, poſſibly not inferior in virtue to the moſt celebrated natural ones.

As the antiſeptic powers of fixed air ſeem to be moſt conſiderable when a ſtream of the pure air itſelf is thrown upon the matter to be ſweetened, ſome practitioners have injected bladders full of it by way of clyſter where the *primæ viæ* were loaded with highly putrid fæces. On this principle, too, patients with ulcerated lungs have been directed to reſpire fixed air as it roſe from an effervеſcing mixture; and, notwithſtanding the inſtantly fatal effects of breathing this air abſolutely pure, it was found to be perfectly innoxious when thus paſſing through a body of atmoſpherical air. The ſame vapour has alſo been received upon the naked ſurface of cancerous and other putrid ulcers, with a view to ſweeten and correct the diſcharge.

In theſe methods has this ſubſtance been directly applied to medical purpoſes. But its application has by ſome been ſuppoſed to be indirectly much more extenſive, as they have attributed to it the efficacy of various other remedies. Fermented and fermentable liquors, fruits and freſh vegetables, have been thought uſeful in putreſcent habits and diſeaſes chiefly as affording a large ſupply of this principle, which might be abſorbed by the ſtomach and inteſtines. The uſe of Wort in the Sea Scurvy (ſee the article *Frumentum*) was profeſſedly ſuggeſted by Dr. Macbride on this ſuppoſition.

From what has been above ſaid, the experienced reader will eaſily perceive in what claſſes of diſeaſes this medicine may be expected to be ſerviceable. There is one diſorder, however, in which its propoſed uſe may not appear ſo deducible from its obvious qualities: this is, the ſtone in the kidneys and bladder. It is well known that the medicines from which moſt of late years has been expected in theſe caſes, are lime-water and cauſtic alkali, the direct chemical oppoſites to fixed air. But as the nature of urinary calculi is acknowledged to be very various, it is not unreaſonable to propoſe oppoſite ſolvents for them. That calcareous earth may be rendered ſoluble in water by the medium of fixed air, is not to be doubted; and there are calculi which are certainly calcareous. From indiſputable experiments it appears, that pieces of calculi have undergone a ſolution out of the body in water impregnated with fixed air; but it can ſcarcely be hoped that the menſtruum will reach the bladder in ſo concentrated a ſtate. Caſes have, however, been publiſhed, in which manifeſt relief was obtained from the free uſe of a beverage of water ſaturated with fixed air; and it has this advantage above alkaline ſolvents, that ſubſtances abounding in fixed air are more friendly to the general health than alkaleſcent ones. It has been propoſed to throw pure fixed air directly into the bladder by a ſuitable apparatus; but no experiment of this kind has been made public.

The reader who wiſhes for further information concerning the medical uſes of fixed air, may conſult the ingenious *Commentary* on the ſubject by Dr. Dobſon.

ÆRUGO.

ÆRUGO Pharm. Lond. & Edinb. Ærugo vel viride æris Ph. Pariſ. VERDEGRIS: copper corroded by a fermented vegetable acid into a bluiſh green ſubſtance. The greateſt quantities are prepared about Montpelier, by ſtratifying copper plates with grape ſtalks, that have been previouſly ſoaked in ſtrong wine, and expoſed to its vapour during a ſecond fermentation of the wine continued to an acetous ſtate *(a)*: the ſubtile acid, with which the ſtalks are thus impregnated, corrodes the ſurface of the plates, in a few days, into verdegris; which is afterwards ſcraped off, moiſtened, and packed up in ſkins. The maſſes, as brought to us, have generally ſome grape ſtalks intermixed: theſe may be ſeparated by pulverization, as being leſs pulverable than the verdegris itſelf. The goodneſs of verdegris is judged of from the deepneſs and brightneſs of its colour, its dryneſs, and its forming, when rubbed on the hand with a little water or ſaliva, a ſmooth paſte free from grittineſs.

THIS concrete is partially diſſoluble in water and in rectified ſpirit, and almoſt totally in vinegar: from the acetous ſolution, well ſaturated,

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(a) V. Montet, *Mem. de l'acad. des ſcienc. de Paris pour l'ann.* 1750 & 1753.

Diſtilled verdegris *ſo called*

and left to exhale ſlowly in a warm air, greateſt part of the verdegris may be recovered in a cryſtalline form. The cryſtals, diſtilled with a ſuitable fire, in a retort or other like veſſel, give over the acetous acid, in a highly concentrated ſtate, but ſomewhat altered by the proceſs.

Mel Ægyptiacum *Ph. Lond.*

Unguentum ex Ærugine *Ph Edin.*

Verdegris is employed externally for deterging foul ulcers, and as an eſcharotic. Hoffman *(a)* recommends it particularly for deſtroying the calloſities of old fiſtulæ: tents of powdered verdegris, made up with ſaliva, or other liquids not fat or oily, conſume, he ſays, the hardeſt callus, in three or four days, ſo as to render it completely ſeparable. A detergent ointment is commonly prepared, by gently boiling five parts of verdegris in fine powder, with ſixteen of honey and ſeven of vinegar, till reduced to a due conſiſtence. On keeping this mixture for ſome time, a thick matter, containing greateſt part of the verdegris, falls to the bottom, and a thinner floats on the top: this laſt is the part made uſe of, unleſs where particular occaſions require it to be rendered more acrid by ſhaking up the thick among it. In the laſt Edinburgh diſpenſatory, an ointment is directed, compoſed of white wax and reſin each two ounces, olive oil one pint, and verdigris half an ounce. When theſe kind of applications are employed for venereal or other ulcerations in the mouth and tonſils, great caution is requiſite, on the part of the patient, to guard againſt any portion of them paſſing into the ſtomach; an accident which is ſaid to have ſometimes happened, particularly in childrens caſes, and to have produced very dangerous and even fatal conſequences.

Verdegris is rarely or never given internally. Some recommend it, indeed, in the doſe of a grain or two, as an emetic, which operates almoſt as ſoon as received into the ſtomach, and which may therefore be of uſe, where poiſonous ſubſtances have been taken, to procure their immediate rejection. It appears, however, highly imprudent, to have recourſe, on ſuch occaſions, to a remedy in itſelf ſo dangerous and ſo virulent; and more eſpecially as a ſpeedy evacuation may generally be obtained, by means of ſubſtances, which are not only innocent, but at the ſame time weaken the force of the poiſon by diluting and obtunding it; as warm water, milk, oils.

AGARICUS.

AGARIC: a fungus, growing on the trunks of trees, without any pedicle; internally of a ſimple and uniform ſtructure throughout its whole ſubſtance.

(a) *Med. rational. De ulceribus.*

1. AGARICUS *Pharm. Lond.* *Agaricus ſive fungus laricis C. B.* Agaric: covered with a brown bark, full of ſmall holes underneath; internally white.

This fungus is met with on old larch trees, in the Levant, and in different parts of Europe: that produced in the Levant is accounted the beſt, but from what particular place or country the ſhops receive it, is not very clear.—It comes forth on the tree in the beginning of ſpring, and continues to increaſe till autumn: at this time, it is cut off, the cortical part ſeparated, and the internal part expoſed for ſome weeks to the ſun, by which its whiteneſs is improved. It is brought into the ſhops in irregular pieces, of different magnitudes, of a chalky whiteneſs, and very light: the beſt is eaſily cut with a knife, friable betwixt the fingers, and has no hard, or gritty, or coloured veins.

AGARIC has no remarkable ſmell: chewed, it impreſſes firſt a conſiderable ſweetneſs, which is followed by a nauſeous acrimony and bitterneſs. It is difficultly reduced to a fine powder in a mortar, on account of its fungous texture: it may be rendered more eaſily pulverable, by moiſtening it with a ſolution of gum tragacanth, and afterwards thoroughly drying it.

It gives out little of its active matter to aqueous menſtrua: after long boiling in water, it retains great part of its taſte, and proves remarkably viſcid and tenacious. The decoction has little taſte or colour: inſpiſſated, it leaves a ſmall quantity of a brown coloured nauſeous extract.

Rectified ſpirit takes up nearly the whole of the active matter, leaving the agaric almoſt inſipid. The tincture is of a fine yellow colour, and of an unpleaſant ſweetneſs, which continues long in the mouth, and in good meaſure covers the heat and pungency of the ſpirit. The extract, remaining on diſtilling off the ſpirit, diſcovers leſs of the ſweet, and more of the offenſive bitterneſs of the agaric. Proof ſpirit has nearly the ſame effect as the rectified.

Theſe experiments were made on the internal ſubſtance of agaric, as commonly met with in the ſhops. The cortical part ſeems to be of a different quality: Mr. Boulduc relates, that a ſpirituous tincture, drawn from this, had ſuch an abominable taſte, that a ſingle drop, laid on the tongue, occaſioned vomiting, and a loathing of food for a whole day(*a*). This fungus appears to differ alſo greatly in quality, at different periods of its growth: Bellonius informs us, that when full of juice, before it has come to maturity, its offenſive effluvia are apt to excite violent ſymptoms in thoſe who incautiouſly cut it from the tree(*b*).

Agaric, taken from a ſcruple to two drams or more, is ſaid to act weakly, though not very mildly, as a cathartic. It was formerly held in conſiderable eſteem, and ſuppoſed to evacuate peccant humours from the remote parts of the body: but the great ſlowneſs of its operation, from which alone that quality appears to have been deduced, its occaſioning little evacuation, and being commonly productive of nauſeæ, ſickneſs, and gripes; have brought it now deſervedly into diſuſe. Gummy or mucilaginous ſubſtances, with which it was formerly made into troches and pills, in ſome degree correct its ill qualities: aromatics are, in this intention, of very little uſe. Extracts made from it with vinegar, with wine, and with water in which a little fixt alkaline ſalt has been diſſolved, are ſaid to purge more effectually, and with leſs inconvenience, than the agaric in ſubſtance; though even theſe preparations do not appear to be equal to the more common and experienced cathartics. The antients ſuppoſed it to be poſſeſſed of alexiterial powers, and in conſequence of this imaginary virtue made it an ingredient in the theriaca, which is the only officinal compoſition wherein it is now retained.

2. AGARICUS QUERCINUS, *fungus igniarius: Agaricus pedis equini facie Tourn. Fungi arborei ad ellychnia J. B. Boletus igniarius Linn.* Agaric of the oak, called by ſome, from its readily catching fire, touchwood or ſpunk: growing in form of a horſe's hoof; externally of an aſh colour, internally duſky coloured, ſoft and tough. Though denominated from the oak, on which the beſt ſort is ſuppoſed to be produced, the ſame fungus is found on ſeveral other kinds of old trees, throughout Europe.

THE agaric of the oak has lately come into eſteem as an external ſtyptic. It has been ſaid to prevent hæmorrhages after amputations, as effectually

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(*a*) Boulduc, *Mem. de l'acad. roy. de ſcienc. de Paris, pour l'ann.* 1714.

(*b*) Bellonius, *de arborib. conif. &c. p.* 26.

effectually as the painful operation by the needle; and to reſtrain bleedings in wounds, of ſeveral days or weeks ſtanding, where the parts are become ſo rotten as to become incapable of bearing ligatures. For theſe purpoſes, the internal ſoft part of the fungus, divided into pieces of different ſizes, and beaten with a hammer till it may be eaſily torn with the fingers, is applied to the orifices of the veſſels, with the uſual dreſſings over it. In a ſhort time the extremities of the veſſels are ſaid to be found contracted into a conical ſhape, and the orifices ſtopt with plugs of coagulated blood, ſufficient to reſiſt the force of the circulation.

Caſes have been publiſhed, in which this application ſeemed to anſwer the character given it *(a)*: in others, and thoſe not a few, it proved ineffectual. Some have remarked, that where it ſeemed to ſucceed, the ſubjects were brought ſo low before the operation, that little danger was to be apprehended from a hæmorrhagy, though no other application had been made than that of dry lint and flour *(b)*.

Thus much is certain, that the agaric has already loſt greatly of its repute, both in France, where it was firſt introduced, and in England; and that it does not appear, from its ſenſible qualities, to be poſſeſſed of any truly ſtyptic power, at leaſt in any conſiderable degree. Chewed, in ſubſtance, it diſcovers no taſte: boiled in freſh parcels of water, it yielded about one fourteenth its weight of extract, which had only a weak ſweetiſh taſte, mixed with a kind of bitterneſs: treated in the ſame manner with rectified ſpirit, it yielded about one eighth its weight of an extract, which had leſs taſte than the other.

It is probable that this fungus acts no otherwiſe than as a pliable ſoft ſubſtance, adhering to the orifices of the veſſels, till they have contracted ſpontaneouſly. Some other fungi were employed formerly in the ſame intention, and there are late accounts, in the Philoſophical Tranſactions, of two having been uſed with ſucceſs; namely, the *lycoperdon*, or duſty muſhroom; and that found on the caſks and walls of wine-vaults, and thence called *fungus vinoſus*.

AGNUS.

AGNUS CASTUS, Vitex, Pharm. Pariſ. Agnus folio non ſerrato J. B. Vitex Agnus Caſtus Linn. AGNUS-CASTUS, or chaſte-tree:

(a) Warner, *Caſes in ſurgery, &c.*

(b) Neale, *Obſervations on the uſe of agaric, &c.*

a ſmall tree or ſhrub, with tough branches, digitated narrow leaves, and monopetalous purpliſh flowers ſtanding in ſpikes on the tops of the branches, followed by oblong whitiſh ſeeds. It is a native of the warmer climates, and cultivated in ſome of our gardens.

The ſeeds of agnus were formerly celebrated as antaphrodiſiacs; but experience does not diſcover in them any degree of ſuch virtue, and ſome have aſcribed to them an oppoſite one. From their ſenſible qualities, their virtues, of whatever kind, do not appear to be very conſiderable. The ſeeds in ſubſtance, as met with in the ſhops, have little taſte, and ſcarcely any ſmell, though deſcribed by authors as very hot and biting: extracts made from them, by water or ſpirit, are weakly bitteriſh and ſomewhat pungent. They ſeem to abound chiefly with a groſs inſipid oil, of the expreſſible kind; which is in part taken up by rectified ſpirit, and ſeparates and falls to the bottom during the inſpiſſation of the tincture: the oily matter is of a deep ſaffron colour, the inſpiſſated extract ſomewhat paler.

AGRIMONIA.

AGRIMONIA Pharm. Edinb(a). *Eupatorium verum ſive agrimoni C. B. Agrimonia Eupatoria Linn.* AGRIMONY: a hairy plant; with winged leaves, compoſed of oblong indented ſegments, with ſmaller portions between, ſet on middle ribs which ſtand alternately on the ſtalk: on the top grows a long ſpike of pentapetalous yellow flowers, followed by little burs, containing, each, one or two ſeeds. It is perennial, grows wild in hedges and about the ſides of fields, and flowers in May.

THE leaves of agrimony have a ſlightly bitteriſh roughiſh taſte, accompanied with an agreeable, though very weak, aromatic flavour: the flowers are in ſmell ſtronger and more agreeable than the leaves, and in taſte ſomewhat weaker. They readily give out their virtues both to water and to rectified ſpirit: the leaves impart to the former a greeniſh yellow, to the latter a deep green colour: the flowers yield their own deep yellow tincture to both menſtrua. In diſtillation with water, there ariſes a very ſmall portion of a yellowiſh eſſential oil, which ſmells ſtrongly and agreeably of the herb.

(a) Expunged.

Agrimony is one of the milder corroborants; and in this intention is ſometimes employed, eſpecially among the common people, againſt habitual diarrhœas, and cachectic, and other indiſpoſitions from a lax ſtate of the ſolids: infuſions of the leaves, which are not ungrateful, may be drank as tea. It is ſometimes joined with other ingredients in diet drinks for purifying the blood; and in pectoral apozems.

THIS plant is often raiſed in gardens; and does not ſeem to receive, from culture, any material change in its quality. Another ſpecies or variety, of foreign original, common alſo in our gardens, and differing little in appearance from our indigenous agrimony, promiſes to be ſuperiour to it in virtue; as its taſte is more aromatic, and its ſmell much ſtronger and very agreeable: Caſpar Bauhine calls it *eupatorium odoratum*, Fabius Columna *eupatorium dioſcoridis, odoratum & aromaticum.*

ALCHIMILLA.

ALCHIMILLA Pharm. Edinb.(a) *Pes leonis ſive alchimilla J. B. Alchimilla vulgaris Linn.* LADIES MANTLE: an herb, with undivided plaited multangular leaves, and imperfect flowers ſtanding in form of umbels on the tops of the ſtalks: the cup conſiſts of four larger and four ſmaller leaves placed alternately. It is perennial, grows wild in dry fields and meadows, and flowers from May to Auguſt.

THE leaves of alchimilla are weakly aſtringent, without any remarkable ſmell or flavour. They have been recommended, internally, againſt alvine and uterine fluxes, in which they may doubtleſs be of ſome ſervice; and externally, againſt certain relaxations, which can yield but little to aſtringents of ſo mild a kind. Their ſtyptic matter is extracted both by water and by ſpirit, and when ſeparated from the fluids by inſpiſſation, is ſtill found to be weak: the ſpirituous extract is the ſtrongeſt, this menſtruum diſſolving leſs, than water does, of the inſipid mucilaginous ſubſtance of the leaf. The roots of the plant are more aſtringent than the leaves, and the extracts made from them, are proportionably ſtronger. They both ſtrike a black colour with ſolutions of chalybeate vitriol.

(a) Expunged.

ALKEKENGI.

ALKEKENGI, Halicacabum, Pharm. Edinb.(a) Solanum veſicarium C. B. Phyſalis Alkekengi Linn. WINTER-CHERRY: a low, ſomewhat hairy plant; with unbranched ſtalks; large heart-ſhaped acuminated leaves, ſtanding in pairs at the joints; and whitiſh bell-ſhaped flowers, riſing in the boſoms of the leaves, divided about the edges into five ſegments: the flower-cup changes into a pentagonal capſule or bladder, which, burſting, diſcovers in its bottom a red fruit like a cherry, containing numerous ſmall ſeeds with a juicy pulp.—It grows wild in ſome parts of Europe, and ſpreads ſo much in our gardens as not to be eaſily extirpated. The fruit ripens about the beginning of October, and ſometimes continues to near the end of December; after which, the plant dies to the ground.

WINTER-CHERRIES have an acidulous not unpleaſant taſte, mixed with, or followed by, a ſlight bitterneſs: the covering, in which they are incloſed, has a ſtrong pungent bitterneſs, with which it is apt to impregnate the cherries, unleſs ſome care is taken in gathering them. As medical writers in general ſpeak of this fruit as being very bitter, we may preſume that it has been often uſed with this extraneous bitter impregnation.

Theſe cherries are accounted powerful diuretics, operating without heat or irritation, and which may therefore be ventured on in inflammatory diſtempers: five or ſix of the cherries in ſubſtance, or an ounce of the expreſſed juice, are directed for a doſe. They are ſaid to be, in ſome places, eaten, among the common people, by handfuls*(b)*, and with good ſucceſs, againſt ſuppreſſions of urine, and for promoting the expulſion of mucus and gravel. Mr. Ray tells us of a gouty perſon, who was cured, and kept free from returns of his diſorder, by taking eight of theſe cherries at each change of the moon; and that the operation of the medicine procured a diſcharge of extremely fetid matter by

(a) Expunged.

(b) Caſp. Hoffman, *de medicament. officinal. lib.* ii. *cap.* 217.

urine(*a*). The cherries may be dried ſo as to be pulverable, or the depurated juice inſpiſſated with a gentle heat to the conſiſtence of a rob or extract, and in this ſtate preſerved for uſe.

ALLIARIA.

ALLIARIA Pharm. Edinb. (*b*) *C. B.* *Eryſimum alliaria Linn.* SAUCE-ALONE, or jack-by-the-hedge: a plant, with roundiſh, or heart-ſhaped, ſlightly indented leaves; and firm upright ſtalks; on the tops of which, and in the boſoms of the leaves, come forth cluſters of tetrapetalous white flowers; followed by oblong bivalvous pods, full of black ſeeds. It is biennial, grows wild in hedges, and flowers in May.

THE leaves of alliaria have a moderate acrimony, and a ſtrong flavour greatly reſembling that of garlic or onions: they give the ſame kind of durable taint to the breath, as thoſe roots; and have been uſed for the ſame culinary purpoſes. They loſe greateſt part of their ſmell, and a little of their taſte, on being moderately dried: after keeping for ſome months, the taſte, as well as ſmell, ſeemed to be wholly loſt: the leaves, on being chewed, proving merely mucilaginous. The juice, expreſſed from the freſh leaves, is ſtrongly impregnated with their active matter, but loſes greateſt part of it on being inſpiſſated to an extract with the gentleſt warmth: in its liquid ſtate, duly ſecured from the air, it may be kept uninjured for many months. On diſtilling the freſh herb with water, there ariſes a ſmall portion of eſſential oil, which taſtes and ſmells exceeding ſtrongly. Great part of the virtue of the plant ariſes alſo in evaporation with rectified ſpirit; an extract, made by this menſtruum, having little taſte or ſmell, though the tincture, before the inſpiſſation, has a ſtrong flavour of the alliaria. This herb appears, therefore, to differ from garlic, and agree with onions, in the volatility of its active principles.

Alliaria, taken internally in any conſiderable quantity, frequently excites a ſweat, which is impregnated with its ſmell(*c*): it ſtands recommended as a very powerful diaphoretic, and diuretic, as a deobſtruent in aſthmatic diſorders, and externally as an antiſeptic, in gangrenes and

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(*a*) Ray, *hiſt. plant.* 681.

(*b*) Expunged.

(*c*) Boerhaave, *hiſt. plant. Lugd. Bat.* 437.

putrid ulcers. Boerhaave informs us, that he cured a gangrene of the leg, ariſing from a neglected fracture and contuſion, by applying the leaves of alliaria bruiſed with wine*(a)*.

ALLIUM.

ALLIUM Pharm. Lond. & Edinb. Allium ſativum C. B. & Linn. Garlic: a plant with long narrow graſs-like leaves; among which ariſes a ſingle ſtraight hollow ſtalk; bearing on the top a cluſter of ſmall white hexapetalous flowers; each of which is followed by a fruit about the ſize of a pea, full of dark coloured roundiſh ſeeds. The roots are of the bulbous kind, of an irregularly roundiſh ſhape, with ſeveral fibres at the bottom: each root is compoſed of a number of ſmaller bulbs, called *cloves* of garlic, incloſed in one common membranous coat.—It is ſaid to grow wild in Sicily: with us, it is raiſed in gardens, from ſeed, for culinary as well as medicinal uſes.

The roots of garlic have a penetrating highly acrimonious taſte, and a ſtrong, offenſive diffuſive ſmell. Applied to the ſkin, they inflame and often veſicate the part. Taken internally, they ſeem to extend their action, in a ſhort time, through the whole habit; impregnating, with their ſtrong ſcent, not only the breath, but the urine, the milk of the breaſt or of the udder, the ſerum which oozes from ſores or iſſues*(b)*, and the fluid which perſpires through the ſkin. The other parts of the plant poſſeſs the ſame qualities, in a lower degree. In Spain, garlic is ſaid to be equally mild with onion, and is uſed as food.

Garlic root has been celebrated, by ſome practical writers, in a variety of diſorders; and condemned by others, not only as an offenſive, but as a noxious drug. It is certain, that there are many caſes, in which it is extremely prejudicial; but that there are many alſo in which it is of great utility. To warm and ſtimulate the ſolids, attenuate thick humours, and reſiſt putrefaction, ſeem to be its primary virtues. Hence, in hot bilious conſtitutions, where there is already a degree of irritation, where the juices are thin and acrimonious, or the viſcera or inteſtines unſound, it is apparently improper, and ſeldom fails to produce headachs, flatulencies, thirſt, febrile heats, and inflammatory ſymptoms in various ſhapes. In cold ſluggiſh phlegmatic habits, on the other hand, it proves a ſalutary and powerful corroborant, expectorant, diuretic, and, if the patient is kept warm, ſudorific. In loſs of appetite, and humoral aſthmas, where the ſtomach or lungs are oppreſſed by viſcid phlegm, this medicine has generally good effects. It has likewiſe been found ſerviceable, as a warm ſtrengthener, in the beginning of dropſies, and for preventing a new accumulation of water after evacuation: Sydenham (a) relates, that he has known the dropſy cured by the uſe of garlic alone.

(a) Boerhaave, *hiſt. plant. Lugd. Bat.* 437.

(b) Bennet, [*Chriſt. Benedictus*] *tabidorum theatr. exerc.* 29. *p.* 81.

Some have held it in great eſteem as an antidote againſt the contagion of peſtilential and other putrid diſorders; whence it received the name of *theriaca ruſticorum*. It is uſed alſo among the common people, ſlightly boiled in milk, as an anthelmintic; and Hoffman looks upon it as one of the capital medicines of that claſs.

Garlic is ſometimes employed externally, in unguents and lotions, as an antiſeptic and diſcutient; and is frequently made an ingredient in the ſtimulating epithems, applied to the ſoles of the feet, in the low ſtage of acute diſtempers, for raiſing the pulſe and relieving the head. Sydenham aſſures us (b), that none of the ſtimulants operate, in this intention, more powerfully than garlic: he obſerves, that it ſometimes occaſions intolerable pain, which may be relieved by a cataplaſm of bread and milk. Dr. Cullen remarks that it is not ſo apt to ulcerate the part as muſtard; more capable of being abſorbed, and extending its action to remote parts.

THIS root loſes in drying almoſt nine parts in fifteen of its weight, without ſuffering any conſiderable loſs of its taſte or ſmell: hence ſix grains, dry, may be looked upon as equivalent to fifteen grains of the freſh root.

The freſh root yields, upon expreſſion, about one fourth its quantity of a very viſcid glutinous juice; which ſmells ſtrongly of the garlic, and in good meaſure retains its ſcent after being inſpiſſated, by a gentle warmth, to the conſiſtence of an extract.

Both the freſh and the dry root give out their virtue to water by warm infuſion. A quart of water, poured boiling hot upon a pound of the freſh root cut in ſlices, and ſuffered to ſtand upon it in a cloſe veſſel for twelve hours, becomes ſtrongly impregnated with the ſmell and taſte of the garlic. This infuſion, with a proper quantity of ſugar, makes the ſyrup of garlic of the ſhops.

(a) *Tractat. de hydrope.*

(b) *Epiſt. de variolis confluent.*

Syrupus ex allio *Pharm. Lond.*

Vinegar and honey excellently coincide with and improve this medicine, as a detergent and deobſtruent, in diſorders of the breaſt. A compoſition of this kind is prepared by infuſing an ounce and a half of the freſh root in half a pint of vinegar, and diſſolving in the ſtrained liquor, by the heat of a water-bath, ten ounces of clarified honey: to cover in ſome degree the ill ſmell of the garlic, a little carraway and ſweet fennel ſeeds bruiſed, two drams of each, are boiled for a ſhort time in the vinegar before the garlic is put in.

Oyxmel ex allio *Pharm. Lond.*

The garlic itſelf is never to be boiled, either with vinegar or with watery liquors; the virtues of this root reſiding in an eſſential oil, which exhales along with the ſteam of boiling water, leaving, if the decoction be inſpiſſated, an inert mucilaginous extract, which has very little of the taſte and nothing of the ſmell of the garlic. The oil, obtainable by diſtillation, is of a pale yellowiſh colour and a thick ropy conſiſtence, in ſmall quantity but of great activity, of an extremely ſtrong ſmell and a fiery taſte: great part of the oil remains diſſolved in the diſtilled water, which is very ſtrongly impregnated with the taſte and ſcent of the garlic.

Rectified ſpirit of wine, digeſted on dry garlic root, extracts its virtues more readily and more perfectly than either water or vinegar. With this menſtruum, the active matter of the garlic does not eaſily exhale: the ſpirit diſtilled off from the filtered tincture has very little taſte or ſmell of the root, nearly all its virtue remaining in the inſpiſſated extract.

ALNUS.

ALNUS Pharm. Pariſ. Alnus rotundifolia glutinoſa viridis C. B. Betula Alnus Linn. ALDER: a tall coniferous tree, common in watery places; with very brittle branches; roundiſh, crenated, clammy leaves; a rugged blackiſh brown bark; and reddiſh wood.

ALL the parts of the alder tree are more or leſs aſtringent and bitter. The bark is a ſtrong ſtyptic, and might, doubtleſs, be applied to the ſame purpoſes as the other ſubſtances of that claſs, though at preſent rarely or never made uſe of medicinally, unleſs ſometimes among the common people in fomentations and epithems.

Tournefort reports *(a)*, that in the Alpine countries, it is cuſtomary to procure a plentiful ſweat, by covering the patient all over with bags of alder leaves heated; and that by repetitions of this operation, rheumatiſms, and ſciaticas, are commonly cured. In this way of application, it is apparently the heat and moiſture, and not any peculiar quality of the alder leaves, that is the medicine. * Dr. Murray, of Gottingen, recommends from his own experience, the leaves of alder chopt and heated over the fire, as the beſt remedy with which he is acquainted for diſperſing milk in the breaſts *(b)*.

ALOE.

ALOES: a bitter, gummy-reſinous, inſpiſſated juice; prepared from the leaves of certain thick fleſhy-leaved plants of the ſame name. Three ſorts of it are diſtinguiſhed in the ſhops.

1. ALOE SOCOTORINA *Pharm. Lond.* *Aloe ſuccotrina Ph. Edinb.* Socotorine aloes; brought from the iſland Socotora in the Indian ocean, wrapt in ſkins; obtained from the *Aloe ſocotrina anguſtifolia ſpinoſa flore purpureo Breyn:* a variety of the *Aloe perfoliata Linn.* This ſort of aloes is of a bright ſurface, and in ſome degree pellucid; in the lump, of a yellowiſh red colour with a purpliſh caſt; when reduced into powder, of a golden colour. It is hard and friable in the winter, ſomewhat pliable in the ſummer, and ſoftens betwixt the fingers. Its bitter taſte is accompanied with an aromatic flavour, but not ſufficient to prevent its being diſagreeable: the ſmell is not very unpleaſant, and ſomewhat reſembles that of myrrh.

2. ALOE HEPATICA *Pharm. Edinb.* Hepatic, Barbadoes, or common aloes; uſually brought from Barbadoes, the beſt ſort in large gourd ſhells, an inferiour kind in pots, and a ſtill worſe in caſks; extracted from the *Aloe C. B.* *Aloe dioſcoridis & aliorum.* *Sloan jamaic.* This is darker coloured than the foregoing, and not ſo clear or bright. It is

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(a) *Hiſt. des plantes aux environs de Paris.*

(b) *Mater. Medic.*

generally drier and more compact; though ſometimes, eſpecially the caſk ſort, quite ſoft and clammy. Its ſmell is much ſtronger and more diſagreeable: the taſte intenſely bitter and nauſeous, with little or nothing of the aromatic flavour of the ſocotorine.

3. Aloe caballina. Caballine or horſe aloes; prepared, probably, from the *aloe guineenſis caballina vulgari ſimilis ſed tota maculata Commel. præl.ud.* not, as is generally ſuppoſed, the feces of the hepatic; the difference not being in purity, but in quality. It is eaſily diſtinguiſhed from both the foregoing by its ſtrong rank ſmell: in other reſpects it agrees pretty much with the hepatic, and is, not unfrequently, ſold in its place. Sometimes it is prepared ſo pure and bright as ſcarce to be diſtinguiſhable by the eye even from the ſocotorine, but its offenſive ſmell readily betrays it; and if this alſo ſhould be diſſipated by art, its wanting the aromatic flavour of the finer aloes will be a ſufficient criterion.

Aloes is a ſtimulating cathartic bitter. Taken in ſufficient doſes to purge effectually, as half a dram or two ſcruples, it occaſions commonly a great irritation about the anus, and ſometimes a diſcharge of blood. In ſmaller doſes, as ten or twelve grains, repeated once or twice a day, it not only unloads the firſt paſſages, but attenuates and diſſolves viſcid humours in the remoter parts, warms the habit, quickens the circulation, and promotes the menſtrual and hæmorrhoidal fluxes: its continued uſe renders the blood ſenſibly more fluid, as appears on veneſection. For a time, in theſe ſmall doſes, it does not act by ſtool; but at length it produces a gentle looſeneſs, of longer continuance than that occaſioned by moſt other purgatives: hence its utility in habitual coſtiveneſs. This ſtimulating cathartic is particularly adapted to perſons of a phlegmatic temperament and ſedentary life, to cachectic indiſpoſitions, and oppreſſions of the ſtomach by viſcid crudities contracted from irregularity: in dry bilious habits, it is often injurious, immoderately heating the blood, or inflaming the bowels.

This bitter juice is accounted deſtructive to worms, or to the matter which favours their production, whether taken internally, or applied in plaſters to the umbilical region. It is powerfully antiſeptic;

ſeptic; and commonly made an ingredient in tinctures and balſams for cleanſing and healing wounds or putrid ſores.

Aloes conſiſts of a reſinous matter, and a large proportion of a ſubſtance called gum. By boiling in water, in the proportion for inſtance of four ounces to a quart, it nearly all diſſolves, except the impurities, into a dark coloured liquor; which on ſtanding in the cold for a night, depoſites the reſin to the bottom, the gummy part continuing diſſolved. From this ſolution (poured off from the precipitated reſin, and, if any feculencies appear in it, paſſed through a ſtrainer) the gum may be recovered in a ſolid form by evaporation. The coarſer ſorts of aloes may be purified from their feculencies, without any ſeparation of the gummy and reſinous parts, by ſtraining the ſolution whilſt hot, and ſetting it directly to evaporate, without ſuffering it to ſettle.

Reſina aloes *Ph. Lond.*

Gummi aloes *Pharm. Lond.*

Aloe lota *Ph. Edinb.*

The hepatic aloes is found to contain more reſin and leſs gum than the ſocotorine, and this than the caballine. Twelve ounces of caballine aloes yielded two of reſin, the ſame quantity of ſocotorine three, of hepatic almoſt four: of gummy extract, the caballine yielded nine ounces, the ſocotorine ſomewhat leſs than nine, the hepatic eight. The watery ſolution of the gummy part of the ſocotorine, after the ſeparation of the reſin, appeared of a bright brown colour, with a caſt of red; that of the caballine, deep reddiſh brown; of the hepatic, browniſh yellow, without any tendency to redneſs.

The reſins of all the ſorts, purified by ſolution in ſpirit of wine, (for in their ſettling from the watery decoction of the aloes, the impurities of the juice ſubſide along with them) have little ſmell; that obtained from the ſocotorine has ſcarcely any perceptible taſte, that of the hepatic a ſlight bitteriſh reliſh, and that of the caballine a little more of the aloetic flavour. The gummy extracts alſo are leſs diſagreeable than the crude aloes: the extract of the ſocotorine has very little ſmell, and is in taſte ſcarcely unpleaſant: that of the hepatic is in ſmell ſomewhat ſtronger, but ſeems to be in taſte rather leſs ungrateful than the extract of the ſocotorine: the gum of the caballine retains a conſiderable ſhare of the peculiar rank ſmell of this kind of aloes, but its taſte is not much more unpleaſant than that of the extracts made from the other two.

The purgative virtue of aloes, contrary to that of moſt of the other cathartic vegetables, reſides chiefly in the gummy part; the reſin, though taken in conſiderable doſes, whether divided by teſtaceous powders, or diſſolved in ſpirit of wine, having little or no cathartic power. Socotorine aloes, which contains more gum than the hepatic; purges more, and with greater irritation: the former therefore is to be preferred where a ſtimulus is required, as for promoting or exciting the menſtrual flux; whilſt the latter is better fitted for a common purge. The vulnerary and balſamic virtues, on the other hand, reſide principally in the reſin; and hence the hepatic, which is more reſinous than the ſocotorine, is found to be more ſerviceable in external applications. The caballine aloes, on account of its offenſive ſmell, is very rarely made uſe of, at leaſt under its own name, either internally or externally.

The purgative aloetic gum diſſolves, not only in watery, but likewiſe in ſpirituous menſtrua; and even more readily in proof ſpirit and in rectified ſpirit, than in water or wine. When powdered aloes is macerated, or digeſted in a gentle warmth, with water, with wine, or with vinous ſpirits largely diluted, the powder ſoftens, and becomes tenacious, and the ſolution goes on exceeding ſlowly: hence in making tinctures or ſolutions of aloes in theſe kinds of menſtrua, it is of advantage to mix with the powder ſome clean dry ſand, which by keeping it divided, promotes the diſſolution. With rectified and proof ſpirits, the aloes does not cohere, but continues powdery till diſſolved.

Aloes is ſometimes taken by itſelf, ſometimes mixed with ſaponaceous medicines, warmed with aromatics, acuated with pungent materials, combined with the deobſtruent gums, *&c.* Many of theſe kinds of compoſitions have been received as officinals: a pill, for example, compoſed of equal parts of aloes and extract of gentian, with a fourth part of ſal polychreſt*: a powder, of eight parts of aloes, with two of canella alba†: a tincture, made by digeſting five ounces of this powder in five‡ pints of mountain wine; or one ounce of aloes, with one dram each of Jamaica pepper and ginger, in a pint and a half of the ſame wine‖: pills of four parts of aloes, two of myrrh, and two§ or one** of ſaffron, made up with ſyrup of ſaffron or of orange peel: vinous and ſpirituous tinctures of the aloes with different proportions of the myrrh and ſaffron⸸, *&c.* Among different aromatic materials made trial of, cloves ſeemed the beſt adapted for alleviating the offenſiveneſs of the aloes: the committee appointed by the London college for reforming their pharmacopœia, made choice of canella alba, on account of its not rendering the medicine ſo hot as the neceſſary quantity of the clove itſelf would do, and

* Pil. aloeticæ *Pharm. Edinb.*

†Hierapicra *Pharm. Lond.*

‡Tinct. ſacra *Pharm. Lond.*

‖ *Ph. Edinb.*

§ Pil. Rufi *Ph. Lond.*

** Pil. communes vulgo Rufi *Pharm. Edinb.*

⸸ Elixiria proprietatis varia.

and yet having ſo much of the clove flavour, as to cover the aloes in a ſufficient degree: ſome commend the *caſia caryophyllata*, or clove bark, as having more of the clove flavour, than canella alba, and yet not being very hot.—Where volatile ſpirits are to be joined, a ſolution of the aloes in dulcified ſpirit of ſal ammoniac, or in ſpirit of ſal ammoniac made with quicklime, are very elegant preparations, and require little aſſiſtance from aromatics to render them ſupportable to the palate; the offenſiveneſs of the aloes being greatly abated by the ſpirit, and the pungency of the ſpirit ſheathed by the aloes: the ſpirit of ſal ammoniac made with fixt alkaline ſalt does not diſſolve near ſo much of the aloes as the two abovementioned.

ALSINE.

ALSINE Pharm. Edinb. (a) *Alſine media C. B. & Linn.* CHICKWEED: a ſmall, creeping, juicy herb; annual, common at all times of the year in ſhady cultivated grounds.

THIS herb was formerly employed in cataplaſms againſt inflammations; and its expreſſed juice, or decoction, given alſo internally, as an aperient, antiſcorbutic, antiphlogiſtic, and as a reſtorative, that is, perhaps, for abating hectic heats, in atrophies and conſumptions. Nor do the virtues aſcribed to it appear to be wholly without foundation: experiment diſcovers, that it is not deſtitute of active matter, though this matter is ſo far divided and diluted in the herb, as ſcarcely to manifeſt itſelf till ſeparated from the groſſer parts.

The freſh leaves have an herbaceous ſomewhat ſaline taſte, without any remarkable ſmell: in diſtillation, with water or with ſpirit, they give over nothing. On expreſſion they yield a large quantity of green coloured turbid juice; which difficultly depoſites its feces upon ſtanding, but immediately parts with them on being heated to ebullition, and being now paſſed through a ſtrainer, looks clear and reddiſh. The depurated juice, inſpiſſated to the conſiſtence of an extract, diſcovers to the taſte a cool penetrating ſaline pungency, which quickly goes off, leaving a ſlight auſterity in the mouth.

(a) Expunged.

ALTHÆA.

ALTHÆA Pharm. Lond. & Edinb. Althæa dioſcoridis & plinii C. B. Althæa officin. Linn. MARSHMALLOW: a ſoft hoary plant: with oblong undivided leaves; and pale fleſh-coloured monopetalous flowers, cut deeply into five ſections, ſet in a double cup, the outermoſt of which is divided into nine parts, the inner into five: the fruit conſiſts of a number of capſules, ſet in form of a flat diſk, containing each a ſingle ſeed: the roots are long and ſlender, with ſeveral fibres, of a pale yellowiſh colour on the outſide, and white within.—It grows wild in marſhes and other moiſt places, though frequently cultivated in gardens. It is perennial, and flowers from June to near the end of ſummer.

ALL the parts of althæa abound with a glutinous juice, of ſcarcely any ſmell or particular taſte. The dry roots, boiled in water, give out near half their weight of gummy matter; which, on evaporating the aqueous fluid, forms a ſlavourleſs, yellowiſh mucilage. The leaves afford ſcarcely one fourth their weight, and the flowers and ſeeds ſtill leſs; though the two latter have been looked upon by ſome as the moſt mucilaginous, and accordingly preſcribed in leſs quantity *(a)* than the other parts of the plant.

Of all the mucilaginous vegetables, marſhmallow root is, among us, of the moſt general uſe; for obtunding and incraſſating acrimonious thin fluids, in tickling coughs from defluxions on the fauces and lungs, in hoarſeneſs, eroſions of the ſtomach and inteſtines, difficulty and heat of urine; and for lubricating and relaxing the paſſages in nephritic and calculous complaints.

The root is ſometimes given in powder, from a ſcruple to a dram or two, either by itſelf, or in conjunction with other materials of ſimilar intention, as gum tragacanth, ſtarch, *&c.* It is rather too bulky, however, for this form; and may, in moſt caſes, be taken to better advantage in that of an infuſion or decoction, ſweetened with a little liquorice: an ounce of the dry root is ſufficient for a quart or three pints of water, a larger proportion rendering the liquor diſagreeably ſlimy.—A ſyrup, made by boiling a pound of the freſh roots in a gallon of water till half the liquor is waſted, preſſing out the decoction, and after ſettling for a night, boiling it down with four pounds of fine ſugar 'till the weight of the whole is ſix pounds, is kept in the ſhops, and employed occaſionally in ſome diſorders of the breaſt, and for ſweetening emollient decoctions in nephritic caſes.

(a) Geoffroy, *mat. med.* iii. 73.

Syrupus ex althææ *Phar. Lond.*

ALUMEN.

ALUMEN Pharm. Lond. & Edinb. ALUM: a ſemitranſparent, auſtere, ſtyptic ſalt; compoſed of the vitriolic acid, and a certain earth; which earth is either the pure argillaceous earth, or elſe is contained, in great quantity, in all the argillaceous foſſils that have been examined.

The greateſt quantities of this ſalt are artificially produced from different kinds of minerals, whoſe nature and compoſition are little known. A bluiſh ſlate found in the hills near Scarborough and in ſome other parts of England *(a)*, and a whitiſh ſtone at Tolfa near Rome *(b)*, become richly aluminous by calcination; and a bituminous earth near Hall in Saxony, by expoſure to the air: this laſt, if laid in large heaps, grows hot, like the pyritæ, and at length burſts into flame *(c)*. There are, in Sweden, ferrugineous pyritæ, from which alum, as well as vitriol, is obtained *(d)*; and moſt, if not all, of the aluminous ſlates, participate alſo largely of vitriol: it is probable that in all the matrices of this ſalt, the part, which becomes alum, differs from that which in the pyritæ becomes vitriol, only in the former having an argillaceous earth in the place of the metallic calx of the latter.

The alum, produced in the mineral, ſometimes ſhoots upon the ſurface into fibrous efflorefcences, called by the antients, from their form, *alumen plumoſum*; though later times have applied that name to a ſubſtance of a very different kind. The ſalt is extracted from the earthy matter by elixation with water; and afterwards brought to a cryſtalline form, by evaporating the ſolution to a proper pitch, and then ſetting it to

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(a) Colepreſs, *philoſoph. tranſact. No.* 142.

(b) Mercatus, *metallothec. armarium* iii. *cap.* 2.

(c) Hoffman, *obſerv. phyſico-chym. lib.* iii. *obſ.* 8.

(d) Leopold, *relatio de itinere ſuo ſuecico, p. m.* 84, *& ſeqq.*

ſhoot, with the addition of a little alkaline lye or putrefied urine, without which the cryſtallization does not ſucceed. Even when the pure earth, ſeparated from alum, is rediſſolved in the vitriolic acid, the ſolution does not eaſily ſhoot into perfect cryſtals, till ſome alkaline ſalt, fixt or volatile, is added; this acid ſeeming not to fully ſatiate itſelf with the aluminous earth, and the unſatiated part preventing the cryſtallization of the reſt *(a)*. The alkaline liquor is to be dropt in by degrees, till a white precipitation begins to appear; a mark, that all the redundant acid is now ſaturated, and that a further addition would decompoſe more and more, proportionably to its quantity of the alum itſelf.

The Engliſh alum is colourleſs, and commonly in large maſſes; into which it is formed, by melting the cryſtals over the fire, with the addition of a little water, and pouring the fluid matter into wooden tubs, in which it concretes and aſſumes the figure of the veſſel: the Roman is of a reddiſh hue, and in ſmaller cryſtallized maſſes. The name *roch* or *rock* alum is applied among us to the Engliſh, on account of the hardneſs and ſize of its maſſes; and by foreign writers to the Roman, on account of the hard ſtone or rock from which it is extracted. The Roman is thought to be ſomewhat leſs ſtyptic and leſs nauſeous than the Engliſh, and is ſuppoſed by ſome to have for its baſis a ſomewhat different kind of earth.

ALUM is a ſtrong aſtringent; one of the ſtrongeſt of the ſubſtances of that claſs. It is in common uſe for external purpoſes; againſt relaxations of the uvula; in gargariſms for ſpongy ſcorbutic gums; in epithems and collyria for inflammations and defluxions of the eyes, *&c.* In this laſt intention, we have ſcarcely any application more effectual than the coagulum recommended by Riverius, made by agitating the white of an egg with a lump of alum, till it acquires the conſiſtence of an unguent, which is to be ſpread on tow, and applied warm to the eyes at bed-time; proper evacuations, if the inflammation is conſiderable, being premiſed.

Coagulum aluminoſum *Pharm. Lond.*

Internally, it is given in ſmall doſes, of half a grain or leſs, as a mild corroborant; and in larger ones, as ten, fifteen, and ſometimes twenty grains, for reſtraining immoderate hæmorrhages. Theſe large doſes are never adviſable, but in profuſe and threatening evacuations; as they are apt to nauſeate the ſtomach, occaſion gripes, and leave obſtinate conſtipations of the bowels. The firſt doſe or two ſometimes purge a little.

(a) Marggraf, *mem. de l'acad. des ſcienc. de Berlin, ann.* 1754.

It has been cuſtomary to mix alum, for internal uſe, with an equal* or with half its quantity of dragons blood; which ſerves to diſguiſe the alum, and render it, eſpecially when the mixture is made by melting them together*, more ſlow of ſolution in the ſtomach, in conſequence of which it ſits eaſier and may be given with leſs inconvenience in conſiderable doſes: this is, perhaps, the only advantage of the addition of dragons blood to alum. The Edinburgh college, in their laſt edition, have in place of dragons blood ſubſtituted the gum kino, in the proportion of three drams to one ounce and a half of alum; an alteration which much improves the medicine; as this aſtringent gum is perfectly ſoluble in watery menſtrua. Dr. Thompſon, in the medical eſſays publiſhed by a ſociety at Edinburgh, gives an account of the good effects of the former compound in uterine hæmorrhages; and aſſures us, that he had never found any medicine ſo much to be depended on, whether for correcting the too frequent return of the menſes or their too great abundance, for ſtopping the floodings which women with child are ſubject to, or moderating the flow of the lochia. In violent bleedings, he gave half a dram, of a mixture of equal parts of the two, every half hour; and ſeldom failed to ſuppreſs the diſcharge before three or four drams had been taken. The ſucceſs of this medicine in theſe diſorders induced him to preſcribe it in the fluor albus, and in this alſo it had excellent effects.

* Pulvis helvetii.

Pulvis ſtypticus *Ph. Edinb.*

Alum diſſolves in twelve times its weight or leſs of water: on ſetting the ſolution to exhale ſlowly in a moderately warm air, the ſalt concretes into cryſtals of eight or more triangular ſides. The ſolution changes the colour of the blue flowers of plants, or their juices, to a red or purple, as acids do; and like them alſo, it coagulates milk and the ſerous humours of animals. The whey obtained by boiling a pint of cow's milk with two drams of powdered alum, is ſometimes given in uterine hæmorrhages, and recommended alſo in the diabetes *(a)*, in doſes of a quarter of a pint, three or four times a day. This liquor, like other aluminous ſolutions, is not a little ungrateful: nor does this method of obtaining

Serum aluminoſum *Ph. Lond.*

(a) Mead, *monita & præcepta med. p.* 165.

the ſolution admit of ſo much preciſion, as could be wiſhed for in a medicine of ſuch efficacy in regard to the doſe; a conſiderable part of the alum being retained in the curd, which taſtes rather more ſtrongly aluminous than the whey. The whey may be made more elegant by a proper addition of ſugar, and of dried red roſe buds.

This ſalt, expoſed to the fire, eaſily liquefies, bubbles up in bliſters, emits watery vapours amounting to about one ſixth of its weight, and then turns to a light ſpongy unfuſible maſs, which ſeems on taſting to be almoſt inſipid, but gradually diſſolving in the mouth, diſcovers at length the ſame taſte as the alum at firſt. This dried, or burnt alum, as it is called, is ſometimes employed for drying foul ulcers, and conſuming proud fleſh, which it does with great mildneſs, but it is ſaid to have an inconvenience of leaving a hardneſs upon the part.

Alumen uſtum *Phar. Lond.*

The burnt alum, urged with a ſtrong fire, gives out an acid ſpirit exactly ſimilar to that obtained by the ſame means from vitriol; the matter which remains, if the fire has been ſufficiently intenſe and long continued, is the pure earth of the alum, white, light, and inſipid. If any of the alum ſtill retains its acid, which a conſiderable part commonly does though a pretty ſtrong fire had been continued for ſome days, this part may be extracted, by boiling in water, from the pure indiſſoluble earth.

The earth of alum may be ſeparated alſo by diſſolving the alum in water, and adding a ſolution of any pure alkaline ſalt, or rather a volatile ſpirit: the liquor grows inſtantly milky on this addition; and on ſtanding for a little time, the aluminous earth falls to the bottom, its acid being abſorbed by the alkali. This earth, freed from the ſaline matter by repeated ablutions with boiling water, diſſolves readily in all acids: ſolutions of it in the nitrous and marine are more ſtyptic, and more nauſeous than alum itſelf: ſolutions of it in vegetable acids, though ſtrongly ſtyptic, are of a milder and leſs ungrateful kind, and promiſe to be, in many caſes, medicines of no ſmall utility.

AMBRAGRISEA.

AMBRAGRISEA Pharm. Edinb. Succinum griſeum. Succinum cinereum. Ambarum. AMBERGRIS: a marine bitumen; very light, ſo as to ſwim both in water and in rectified ſpirit of wine; growing ſoft in a gentle warmth; when warmed, of a fragrant ſmell; ſoluble in boiling ſpirit of wine, from which, if the ſaturated ſolution be ſet in a very cold place, or if a part of the menſtruum be exhaled, a proportionable quantity of the ambergris concretes into a whitiſh unctuous ſubſtance.

The greateſt quantities of ambergris are met with in the Indian ocean: pieces have likewiſe been now and then diſcovered in our own (a) and other northern ſeas. It is found floating on the ſurface of the ſea, or adhering to rocks, or thrown out upon the ſhores, and ſometimes in the ſtomachs of large fiſhes. It is uſually in ſmall maſſes, though there are accounts of very large ones, weighing more than an hundred (b) pounds, opake, rugged, of a greyiſh or aſh colour intermingled with yellowiſh and blackiſh ſpecks or veins, of a looſe texture, friable in a certain degree like wax, breaking rough and uneven, and frequently containing pieces of ſhells and other like matters. It is ſaid to be at firſt ſoft; and when found in this ſtate, to be often adulterated by incorporating different ſubſtances with it; an abuſe which may in good meaſure be diſtinguiſhed by the appearance and texture of the maſs, and with more certainty by its differences from true ambergris in ſolubility, volatility and ſmell.

Ambergris has ſcarcely any particular taſte; and very little ſmell, unleſs heated, or much handled; in which circumſtances, its ſmell is very fragrant, and to moſt people agreeable: ſet on fire, it ſmells like burning amber. It ſoftens betwixt the fingers, melts in a ſmall degree of heat into the appearance of oil, and in a ſtrong one proves almoſt totally volatile. Diſtilled, it yields an aqueous phlegm, a brown coloured acidulous ſpirit, a deeper coloured oil, at length a thick balſam, and ſometimes a ſmall portion of a concrete ſalt. The ſpirit, oil, balſam, and ſalt, are ſimilar to thoſe obtained by the ſame treatment from amber: except that the oil is of a more grateful ſmell.

It diſſolves in pure ſpirit of wine, almoſt totally, but ſparingly, and not without the aſſiſtance of a boiling heat. Neumann obſerves, that pure ſpirit may be made to take up about one twelfth its own weight of the ambergris: that ſpirits impregnated with a little eſſential oil, whether

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(a) Charleton, *de animal. append. de foſſilib.*

(b) Chevalier, *deſcription de la piece d'ambregris, &c. peſant* 182 *livres.*

by the addition of the oil itſelf, or by diſtillation from oily vegetables, diſſolve it more readily than pure ſpirit: that ſpirits drawn over from fixt alkaline ſalts, extract a deeper tincture, but diſſolve no more, than thoſe which have been rectified without that addition: and that the dulcified acid and alkaline ſpirits have very little effect on it.

Ambergris is, in general, one of the moſt agreeable of the perfumes, and the leaſt apt to diſorder weak conſtitutions, or ſuch as are liable to be offended by ſubſtances of that claſs. Taken internally, from two or three grains to a ſcruple, it is accounted a high cordial, corroborant, and antiſpaſmodic; in which light it is preſcribed by Riverius in hypochondriacal affections. A ſolution of it made in a very highly rectified ſpirit diſtilled from roſes, is recommended by Hoffman, in his phyſico-chemical obſervations, as one of the moſt effectual corroborants of the nervous ſyſtem. The orientals are ſaid to look upon it as an aphrodiſiac, and ſuppoſe that the frequent uſe of it contributes to longevity.

Tinct. ſeu eſſentia ambræ *Pharm. Pariſ.*

The faculty of Paris directs a tincture to be drawn, by digeſting two ſcruples of ambergris in two ounces of a high rectified ſpirit impregnated with roſes. They have alſo a compound tincture made from the ſame quantity of ambergris, with half as much muſk, ten grains of civet, ſix drops of oil of cinnamon, and four drops of oil of rhodium, digeſted together in four ounces and a half of a ſpirit impregnated with roſes and orange flowers. This compound tincture is a very high perfume: a few drops of it give a fine ſcent to a large proportion of inodorous matters. It is uſed alſo for heightening the natural odours of other bodies, as aromatic waters, ſpirits, &c. the principal ſecret, for this purpoſe, conſiſts in adding the perfume ſo ſparingly, that while it heightens and improves the ſmell of the ſubſtance it is joined to, it may not betray its own. The moſt advantageous way of preparing theſe kinds of tinctures, in regard to the ambergris, appears to be, to make the ſpirit boil or ſimmer with it firſt, that this ingredient may be completely diſſolved before the more ſoluble ones are added. The vapour, which exhales during the coction, caught and condenſed in proper veſſels, has little flavour of the ambergris: water, diſtilled from it in the ſame manner, proves conſiderably impregnated with its fragrance.

Tinct. ſeu eſſentia regia *Pharm. Pariſ.*

AMMI.

AMMI.

AMMI. Bishopsweed: an umbelliferous plant; producing ſmall oblong ſeeds flat on one ſide, convex and furrowed on the other. The upper leaves are finely divided; the lower narrow, indented, ſet in pairs along a middle rib, with an odd one at the end.

1. Ammi verum *Pharm. Edinb.* (a) *Ammi alterum ſemine apii C. B. Ammi odore origani J. B. Siſon Ammi Linn.* True biſhopſweed; with reddiſh brown ſeeds: a native of Egypt, from whence the ſeeds are ſometimes, though rarely, brought to us.

The ſeeds of the true ammi, when in perfection, are an elegant aromatic carminative; of a warm pungent taſte, and a pleaſant ſmell approaching to that of origanum. Diſtilled with water, they yield a conſiderable quantity of a yellowiſh eſſential oil, containing their whole ſmell and flavour: the remaining decoction, thus diveſted of the aromatic part of the ſeed, is unpleaſantly bitteriſh. Spirit of wine appears alſo to carry off, in its exhalation, the odorous principle of the ammi; an extract made by this menſtruum, though very warm and pungent, and ſeeming to contain the whole taſte of the ſeeds, having little or nothing of their ſpecific ſmell.

2. Ammi *Pharm. Lond. Ammi majus C. B. & Linn. Ammi vulgare majus latioribus foliis ſemine minus odorato J. B.* Common biſhopſweed; with larger and paler ſeeds: a native of the ſouthern parts of Europe, and propagating itſelf plentifully in our gardens by the ſeeds which fall in autumn.

The ſeeds of this ſpecies are weaker both in ſmell and taſte than thoſe of the preceding; nor does their flavour at all reſemble that of origanum. The ſeveral preparations of them are proportionably different: the eſſential oil, and the ſpirituous extract, are both leſs grateful and leſs pungent.

AMMONIACUM.

GUMMI AMMONIACUM Pharm. Lond. & Edinb. Gum ammoniacum: a concrete gummy-reſinous juice; brought from the

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(a) Expunged.

Eaſt Indies*(a)*; generally in large maſſes, compoſed of little lumps or tears, of a milky whiteneſs: the external parts of the maſs are commonly yellowiſh or browniſh, and the white tears change to the ſame colour on being expoſed for ſome time to the air. Of the plant, from which it is extracted, we have no further knowledge, than what is learnt from the ſeeds found among the tears; which reſemble thoſe of dill, except that they are larger, and apparently belong to a plant of the umbelliferous kind.

Ammoniacum has a ſtrong ſmell, like that of galbanum, but leſs ungrateful, and a nauſeous ſweetiſh taſte which is followed by a bitter one. Its principal virtue is that of reſolving obſtructions; in which intention, it is frequently made uſe of in aſthmas and difficulty of expectoration, in menſtrual ſuppreſſions, and cachectic indiſpoſitions. In obſtructions of the breaſt, it is accounted the moſt effectual of the aperient gums: in hyſteric caſes, ſome of the others are preferred or joined to it, on account, chiefly, of their more powerful ſmell. It is moſt commodiouſly taken in the form of pills: the doſe is a ſcruple or half a dram, every night or oftener: in larger doſes, as a dram, it generally looſens the belly. Applied externally, it is ſuppoſed to diſcuſs hard indolent tumours.

Gummi ammoniacum colatum *Ph. Lond.*

It is purified from the ſeeds, ſmall ſtones, *&c.* commonly intermixed among the tears, by ſoftening or diſſolving it in a little boiling water, preſſing it, whilſt hot, through a ſtrainer, and then inſpiſſating it to its former conſiſtence. For internal uſe, the larger and finer tears, unpurified, are preferable to the common ſtrained gum; for unleſs the proceſs be very ſkilfully managed, it loſes in the purification great part of its ſmell, and not a little of its taſte. In the ſhops, a compoſition of much inferiour virtues has been often ſold in the room of ſtrained ammoniacum.

Lac ammoniaci *Phar. Lond.*

Ammoniacum, triturated with water, diſſolves into an emulſion or milky liquor, and in this form acts rather more effectually than in the ſolid one of a pill. Simple penny-royal water is commonly employed for this purpoſe, in ſuch proportion, that four ſpoonfuls (that is, two ounces) of the emulſion contain thirty grains of the ammoniacum. Some have diſſolved it in vinegar of ſquills, and thus obtained an expectorant undoubtedly powerful, though more unpalatable.

(a) From Egypt, according to Bergius. *Mat. Med. p.* 889.

If the milky ſolutions are kept ſome time, they depoſite a conſiderable quantity of reſinous matter, and become clear. Inſpiſſated, they yield an extract, of no ſmell, and of only a weak bitteriſh taſte. In diſtillation, no eſſential oil is obtained, and the diſtilled water is but ſlightly impregnated with the flavour of the ammoniacum. In this reſpect, ammoniacum differs remarkably from moſt of the other deobſtruent gums, as aſafetida, galbanum, and ſagapenum, which afford not only a ſtrong diſtilled water, but an actual oil containing the concentrated flavour of the gums.

Rectified ſpirit of wine diſſolves near one half of ammoniacum into a tranſparent reddiſh yellow liquor, which taſtes ſtrongly of the drug: the undiſſolved mucilaginous matter is nearly inſipid. On diſtilling the filtered tincture by a gentle heat, the ſpirit which comes over has hardly any flavour of the ammoniacum: nevertheleſs the remaining extract proves weaker, both in ſmell and taſte, than the juice in ſubſtance.

AMOMUM VERUM.

AMOMUM Pharm. Pariſ. Amomum racemoſum C. B. Elettari primum Hort. malabar. TRUE AMOMUM: a cluſter of round fruits, or ſeed veſſels, of an oriental plant. Each fruit is about the ſize of a middling grape; and contains, under a membranous cover, a number of ſmall rough angular ſeeds, of a blackiſh brown colour on the outſide, and whitiſh within: the ſeeds are lodged in three diſtinct cells, and thoſe in each cell joined cloſely together, ſo that the fruit, on being opened, appears to contain three ſeeds. Ten or twelve of theſe capſules ſtand together, without pedicles, upon a woody ſtalk about an inch long: each ſingle capſule is ſurrounded with ſix leaves ſet in form of a ſtar; and the part of the ſtalk, void of fruit, is clothed with leafy ſcales.—Of the other parts of the plant, we have no certain account.

THE ſeeds of amomum are a ſtrong and grateful aromatic; of a quick penetrating fragrant ſmell, ſomewhat like that of lavender, but more agreeable; and of a very warm pungent taſte, approaching to that of camphor. They are ſaid to yield in diſtillation a large portion of a ſubtile eſſential oil. The huſks have the ſame kind of flavour, in a lower degree.—Theſe ſeeds have long been a ſtranger to this country. They are directed as an ingredient in the theriaca, in which they have been commonly ſupplied by the ſeeds of the *amomum vulgare*; and the London college, under the name *amomum*, have now allowed either the *verum* or *vulgare* to be taken indifferently. The college of Edinburgh, while they retained that compoſition, employed cloves as a ſuccedaneum to the *amomum*.

AMOMUM VULGARE.

AMOMUM VULGARE. Siſon quod amomum officinis noſtris C. B. Siſon amomum Linn. BASTARD STONE PARSLEY: an umbelliferous plant; very much branched; with a firm ſtalk higher than the branches; deep green, winged, ſerrated, parſnep-like leaves; upright umbels; and ſmall, narrow, oblong, ſtriated, dark browniſh ſeeds, flat on one ſide and convex on the other. It is perennial, grows wild under moiſt hedges and by the ſides of ditches, flowers in June and July, and ripens its ſeeds in Auguſt.

THE ſeeds of the *amomum vulgare* have a light agreeable ſmell and a mild warm aromatic taſte. They have been ſometimes given as carminatives and diuretics, like the other warm ſeeds, and uſually ſubſtituted in the ſhops for thoſe of the *amomum verum*, from which, however, they are very conſiderably different, in quality as well as in appearance: they are not near ſo hot or pungent, nor is their flavour of the ſame kind.

Theſe ſeeds, infuſed in water, give out very little of their virtue: by boiling, their flavour is ſoon diſſipated, and the liquor becomes diſagreeably bitteriſh: in diſtillation with water, they yield a ſmall portion of a yellowiſh eſſential oil, which taſtes and ſmells ſtrongly and agreeably of the ſeeds.

Rectified ſpirit readily extracts their virtue, and what is pretty ſingular, gains from them a green tincture: the ſpirit, drawn off by diſtillation from the filtered liquor, brings over with it nothing conſiderable of the flavour of the ſeeds: the remaining extract taſtes ſtrongly and ſmells lightly of the amomum, and proves a moderately warm, bitteriſh, not ungrateful aromatic.

AMYGDALA.

ALMOND: an oblong, flattiſh, white kernel, covered with a thin browniſh ſkin: produced by a tree which reſembles the peach in its leaves and flowers, but differs in the fruit; the ſtone being covered with a dry tough matter, of a diſagreeable taſte; and the ſhell, though wrinkled and cavernulous, yet not rugged.

The almond tree, *Amygdalus communis Linn.* is a native of Africa, and cultivated in great plenty in ſome of the ſouthern parts of Europe. It is now likewiſe naturalized to our own climate, in which it produces fruit not inferiour to that which we receive from abroad. It flowers earlier in the ſpring than moſt other trees, though the fruit does not ripen till autumn.

There are two ſorts of almonds, one of a ſoft ſweetiſh taſte, the other bitter. The eye diſtinguiſhes no difference betwixt the trees which yield the ſweet and the bitter ſort, nor between the kernels themſelves. It is ſaid, that the ſame trees, which in a wild ſtate bore bitter almonds, have, when cultivated, afforded the ſweet kind; and that the ſweet, from want of culture, have degenerated into bitter. The almonds we receive from Barbary, where the tree is indigenous, are bitter; whilſt thoſe of Europe, and other parts where it is cultivated, are in general ſweet.

Great care is requiſite in the choice of theſe kernels, particularly the ſweet ſort; as they are very apt to become rancid in keeping, and to be preyed on by an inſect, which eats out the internal part, leaving the almond to appearance entire.

1. Amygdalæ dulces *Pharm. Lond. & Edinb.* Sweet almonds.

Theſe are, for moſt purpoſes, blanched, or freed from the outer thin acrid ſkin, by ſteeping them in hot water till it is ſoftened ſufficiently to be peeled off.

Sweet almonds, uſed in food, are difficult of digeſtion, and afford very little nouriſhment, unleſs extremely well comminuted. As medicines, they contribute, on account of their ſoft unctuous quality, to blunt acrimonious humours in the firſt paſſages, and thus, ſometimes, give preſent relief in heart-burns and other like complaints.

On expreſſion, they yield a large quantity, near half their own weight, of oil: which, though it has no particular taſte or flavour, is ſomewhat more agreeable to the palate than oil olive, or moſt of the other common expreſſed oils; and hence is employed medicinally, for internal uſes in preference to thoſe oils; for obtunding acrid juices, and ſoftening and relaxing the ſolids; in tickling coughs, hoarſeneſs, coſtiveneſs, nephritic pains, *&c.*

On boiling almonds in water, a part of their oil ſeparates and is gradually collected on the ſurface: in digeſtion with rectified ſpirit, no ſeparation was obſerved. Very little of the almond is diſſolved either by ſpirit or by water; the decoctions, made in both menſtrua, leaving, on evaporation, only a ſmall portion of a ſomewhat unctuous ſweetiſh matter.

On triturating the almond with water, the oil unites with the aqueous fluid, by the mediation of the mucilaginous and farinaceous matter of the kernel, into an emulſion or milky liquor; a ſmall quantity of powdery matter remaining undiſſolved: almonds that have undergone the ſtrongeſt action of the preſs, retain ſtill ſo much of their oil, as to communicate a milky hue to water.

Theſe liquors participate of the emollient virtues of the oil, and hence are preſcribed in the ſame intentions as the oil itſelf; particularly in heat of urine and ſtranguries, whether ariſing from a ſpontaneous acrimony of the humours, or the operation of cantharides or other irritating medicines. They are given alſo as diluents in acute diſeaſes; and in ſome caſes, for ſupplying, in ſome degree, the place of animal milk, with which they have a great analogy.

Emulſio communis. An ounce of almonds forms an emulſion of a due conſiſtence with a quart of water; which is to be gradually poured on, after the almonds have been firſt thoroughly pounded. A little ſugar or other grateful materials are commonly added, the palatableneſs of the liquor being a point of ſome importance, as it is in all caſes intended to be drank plentifully. For moſt of the intentions, in which emulſions are generally given, gum arabic is an uſeful addition: if the water is heated, to haſten the ſolution of the gum, it muſt ſtand till grown cold before it is poured on the almonds, otherwiſe the emulſion will be imperfect.

The pure oil of almonds, expoſed for a few days, to a heat equal to that of the human body, becomes rancid and acrimonious. Emulſions, on the other hand, on ſtanding for ſome hours, throw up a white cream to the ſurface, and the whey-like liquor underneath grows, not rancid, but ſour. Hence ſome aſcribe to emulſions an advantage, in inflammatory diſtempers, above the pure oil, of not being ſubject to become acrid and irritating by the heat of the body, but tending rather to a ſtate in which they may contribute to abate inflammation. Acids, mixed with emulſions, promote the ſeparation of the oily and ſerous parts, producing immediately a thick curd, nearly after the ſame manner as they do in animal milk.

The pure oil, triturated with a thick mucilage of gum arabic, forms a more permanent emulſion; from which the oil does not ſeparate on ſtanding for ſome days, nor on the addition of acids; though it is ſpeedily diſengaged by alkalies both fixt and volatile. One part of gum, made into a mucilage with an equal quantity of water, is ſufficient for four parts of the oil. The white or yolk of an egg, and a mixture of ſyrup with a ſmall quantity of volatile ſpirit, render the oil alſo ſoluble in water, but leſs perfectly.

Sweet almonds are an uſeful intermedium for uniting with water ſubſtances which of themſelves are not miſcible with it. Camphor, and the purgative and other reſins, whether native or prepared by art, triturated with about ſix times their quantity of almonds, diſſolve along with them in water into a milky liquor, and are thus excellently fitted for being taken in a liquid form.

2. AMYGDALÆ AMARÆ *Ph. Lond. & Edinb.* Bitter almonds.

BITTER almonds agree with the ſweet in yielding a large quantity of oil, and in being miſcible with water into an emulſion. The oil has no perceptible bitterneſs, and is not in any reſpect diſtinguiſhable from that of the ſweet almonds: the college allow, for medicinal uſe, the oil of either ſort to be taken indifferently. The matter remaining after the expreſſion of the oil, retains all the bitterneſs, and taſtes much ſtronger than the almond did at firſt.

Oleum amygdalinum *Pharm. Lond. & Edinb.*

Great part of the bitter matter diſſolves, by the aſſiſtance of heat, both in water and in rectified ſpirit: and a part ariſes alſo with both menſtrua in diſtillation. Spirit ſeems to extract, and water to elevate, the moſt. It did not appear that the whole is diſſolved or elevated by either, or by the alternate application of both.

Bitter almonds, and emulſions made from them, have been recommended as aperients, reſolvents, diuretics, and anthelmintics. They are, doubtleſs, of ſome uſe in the above intentions, but apparently of too dangerous a kind. The almonds in ſubſtance, taken freely, occaſion ſickneſs and vomiting: to dogs, and ſome other animals, they are poiſonous. A ſimple water, ſtrongly impregnated with their volatile parts by diſtillation, has been found alſo poiſonous to brutes; and there are inſtances of cordial ſpirits flavoured by them being poiſonous to man.

It is probable, that the directly noxious matter of the almond is that in which its bitterneſs and flavour reſide; and that the activity of this matter is increaſed, by its ſeparation from the groſs oil and farinaceous ſubſtance, by which it was enveloped and obtunded in the kernel itſelf. The kernels of other fruits, that have any bitterneſs or particular flavour, appear to be impregnated with a ſubſtance of a ſimilar nature to this poiſonous principle of bitter almonds*(a).

ANACARDIUM.

ANACARDIUM: a moderately large kind of nut; whoſe kernel is covered by two tough rinds; betwixt which is lodged a fungous ſubſtance, containing in its cells an extremely acrid matter, in a liquid ſtate when the nut is freſh, though often by long keeping growing dry. It is the produce of certain large Indian trees, of the claſs of the *prunifera* of Ray.

1. Anacardium *Ph. Pariſ. Anacardium orientale.* Anacardium or Malaca bean: externally of a ſhining black colour, of the ſhape of a heart flattened, with a very thick pedicle occupying almoſt the whole baſis. The tree, which is found only in the Eaſt Indies, is called by Ray *arbor indica fructu conoide cortice pulvinato nucleum unicum nullo oſſiculo*

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*(a) Bergius mentions having frequently preſcribed with ſucceſs an emulſion of bitter almonds in intermittents, in the quantity of a pint or two daily during the intermiſſion; and aſſerts that it had ſometimes cured where the bark had failed. *Mat. Med. p.* 412.

tectum claudente. It is thought to be the *Avicennia germinans* of Linnæus.

2. Acajou, *Cajous, Anacardium occidentale.* Occidental anacardium or caſhew nut: externally of a greyiſh or browniſh colour, of the ſhape of a kidney, ſomewhat convex on one ſide, and depreſſed on the other. The tree, a native both of the eaſt and weſt Indies, is called by Ray *pomifera ſeu potius prunifera indica, nuce reniformi ſummo pomo innaſcente,* the Indian tree bearing a fruit like an apple, with a kidney-ſhaped nut growing on the top of the apple; or rather with an apple growing between the nut and its pedicle, for the nut, as he obſerves, is produced firſt. It is the *Anacardium occidentale* of Linnæus.

These nuts have been commended by ſome as poſſeſſing great medicinal virtues, and condemned by others as very dangerous. The kernels appear to have no hurtful quality: they are ſaid to be eaten by the Indians, have a pleaſant ſweetiſh taſte, yield an inſipid oil upon expreſſion, form an emulſion with water, and are apparently of the ſame nature with ſweet almonds. The acrid juice lodged between the rinds is ſtrongly corroſive, and is ſaid to be uſed by the Indians for conſuming fungous fleſh, and for deſtroying the ſenſibility of aching hollow teeth. The juice is recommended by ſome againſt freckles, and other cutaneous deformities; which it removes only by excoriating the part: Geoffroy cautions againſt the too free application of this coſmetic, and relates that he has ſeen eryſipelaſes break out all over the face from the imprudent uſe of it.

ANAGALLIS.

ANAGALLIS Pharm Pariſ. Anagallis flore phœniceo & anagallis cæruleo flore C. B. Anagallis arvenſis Linn. Pimpernel: a low, creeping, juicy plant, reſembling chickweed; from which it differs, in the leaves being ſpotted underneath, and having no pedicles; in the ſeed veſſel not opening at top, but horizontally; in the flowers being not white, but red or blue. The red flowered pimpernel is called male, and the blue female: they are both annual, grow wild in corn-fields and other cultivated

grounds,

grounds, chiefly in ſandy ones, and flower from May to Auguſt; the firſt is frequent, the other rare.

The leaves of both the pimpernels have hardly any ſmell; and when chewed in ſubſtance, diſcover little other than an herbaceous taſte. They are not however wholly deſtitute of medicinal powers: for the expreſſed juice, on being depurated by ſettling, and then inſpiſſated to the conſiſtence of an extract, affects the organs of taſte with a pungent ſaline auſterity. It appears therefore that theſe herbs have ſome claim to the reſolvent and detergent virtues aſcribed to them by ſome writers; though neither a decoction or tincture of them, nor their juice in its dilute ſtate, and much leſs their diſtilled water, can exert thoſe virtues in any conſiderable degree.

ANCHUSA.

ANCHUSA, Alcanna, Pharm. Edinb. Anchuſa floribus puniceis C. B. Anchuſa tinctoria Linn. ALKANET: a rough hairy perennial plant, with unbranched procumbent ſtalks; of the bugloſs kind, and differing from the common bugloſſes chiefly in the red colour of its roots. It grows wild about Montpelier and in the eaſtern countries, and is cultivated in ſome of our gardens; but the roots, produced in this climate, are paler coloured than thoſe which we receive from abroad.

THE roots of anchuſa, when in perfection, are externally of a deep purpliſh red colour. The red cortical part, ſeparated from the whitiſh woody pith, imparts a fine deep red to oils, wax, and all unctuous ſubſtances, and to rectified ſpirit of wine. To water, it gives only a dull browniſh hue. The ſpirituous tincture, on being inſpiſſated to the conſiſtence of an extract, changes its fine red to a dark brown. In theſe general properties, the deep and pale roots agree with one another, and differ from all the reſt of the red drugs we know of: it is not, therefore, probable, that the deep colour of the foreign roots is owing, as ſome have ſuppoſed, to the introduction of an extraneous tincture.

Alkanet root has little or no ſmell, and ſcarcely any taſte: extracts made from it, by water and by ſpirit, are bitteriſh and roughiſh, but in too low a degree to be regarded as medicines. Its chief uſe is for colouring oils, plaſters, lip-ſalves, *&c.* which receive a fine deep red from one fortieth their weight of the root: the conſiſtent unctuous materials are for this purpoſe to be liquefied in the heat of a water bath, the powdered anchuſa added, the mixture ſtirred now and then, till ſufficiently coloured, and then ſtrained through a linen cloth.

Pomatum rub. *Pharm. Pariſ.*

ANDROSACE.

ANDROSACE ſive Acetabulum Pharm. Pariſ. Acetabulum marinum minus Tourn. Androſaces matthioli, ſive fungus petræus marinus, ſive umbilicus marinus J. B. Cotyledon marina: A ſubmarine production, found on rocks and on the ſhells of fiſhes, about the coaſts of Montpelier and elſewhere; conſiſting of numerous, ſlender, ſhort, filaments, more or leſs bent or arched, of a whitiſh or grey colour, hard and brittle, bearing each upon the top a ſtriated concave body nearly of the figure of an inverted cone.

THIS ſubſtance reduced into powder, is uſed in France, as we are told by the faculty of Paris in the laſt edition of their *codex medicamentarius*, for deſtroying worms, and for dropſies. It does not however promiſe to be of any ſervice in either of theſe intentions; or to differ materially from the coralline, which has alſo been uſed, as a vermifuge, with little ſucceſs: like that marine body, it is apparently of a ſtony or teſtaceous nature, impregnated with a little ſaline matter, which, when freſh, it diſcovers to the taſte. It is remarked of the dried *androſace*, that on being held in the flame of a candle, it yields a dazzling brightneſs, and this repeatedly for ſeveral times *(a)*; a phenomenon which I have obſerved the coralline alſo to exhibit.

ANETHUM.

ANETHUM Pharm. Lond. & Edinb. Anethum hortenſe C. B. Anethum graveolens Linn. DILL: an annual umbelliferous plant, with very finely divided leaves and yellow flowers: producing browniſh or dark coloured oval ſeeds, flatted on one ſide, convex and marked with three longitudinal ridges on the other, and ſurrounded about the edges

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(a) Act. nat. curioſ. dec. ii. *ann.* 2. *p.* 120.

with a yellowiſh leafy margin. It is a native of the warmer climates, cultivated with us in gardens, flowers in July, and in September ſheds its ſeeds, by which the plant is plentifully propagated.

The ſeeds of dill have a moderately warm pungent taſte, and an aromatic ſmell, but not of the moſt agreeable kind: they are given as carminatives, to the quantity of a dram at a time, in flatulent colics and indigeſtion from a laxity of the organs and viſcidity of the humours. The leaves are weaker and leſs grateful than the ſeeds: the roots have nothing of their flavour.

Water extracts very little of the virtues of dill ſeeds by infuſion or digeſtion for many hours. In boiling, their whole flavour exhales along with the watery vapour, and may be collected by diſtillation: the diſtilled water, drawn off to the quantity of a gallon from a pound of the ſeeds, is kept in the ſhops, and occaſionally made the baſis of carminative draughts and juleps: its flavour is more agreeable than that of the ſeeds in ſubſtance. The ſimple water keeps better than any in the ſhops. A two ounce vial full, corked, after ſtanding on a ſhelf many years, was clear, without feculence, and retained the flavour of the dill; and might then be looked on as an elegant ſimple water. Along with the water ariſes a conſiderable portion of eſſential oil, in taſte moderately pungent, and ſmelling ſtrongly of the dill: this is given from one to three or four drops or more, as a carminative, and in hiccups.

Aqua ſeminum anethi *Pharm. Lond.*

Ol. eſſent. ſem. anethi. *Pharm. Lond.*

Rectified ſpirit, digeſted on dill ſeeds, readily extracts both their ſmell and taſte: the colour of the tincture is a bright yellow: the ſpirit, gently diſtilled off from the filtered liquor, brings over very little of its flavour, leaving in the extract nearly all the active parts of the ſeed.

ANGELICA.

ANGELICA: a large umbelliferous plant; with hollow, jointed ſtalks; and indented, oval, pointed leaves, ſet in pairs along a middle rib with an odd one at the end, containing in their veins a milky juice, which on drying turns yellowiſh: the ribs of the leaves are channelled on the upper ſide, and joined to the ſtalks by large membranous baſes or ſheaths. The ſeeds are white or pale coloured, ſomewhat oval, flat on one ſide, convex and marked with three longitudinal ridges on the other, ſurrounded about the edges with a leafy margin. The roots are long and thick, externally of a dark brown colour, internally white and juicy, and when dry of a ſpongy texture.

1. ANGELICA SILVESTRIS: *Angelica ſylveſtris major C. B. Angelica ſylveſtris Linn.* Wild angelica; with all the leaves alike, except that the odd one at the end is larger than the reſt. This ſpecies grows wild, in moiſt grounds, in ſeveral parts of England: it is perennial, and flowers in July. All the parts of this plant are ſimilar in quality to thoſe of the following ſpecies, but rather weaker, and hence the medicinal uſe of this is now ſuperſeded by the other.

2. ANGELICA, *Pharm. Lond. & Edinb. Angelica ſativa C. B. Angelica Archangelica Linn.* Angelica, garden angelica; with the odd leaf at the end of each rib, and generally ſome of the others alſo, cut into two or three lobes.

This is found by the ſides of rivulets in the mountains of Lapland, and cultivated in gardens in the different parts of Europe for medicinal purpoſes and for the uſe of the confectioners. Bohemia and Spain are ſuppoſed to produce the beſt; the college of London directs the roots brought from Spain only to be kept in the ſhops. Linnæus, however, aſſures us, that it proves moſt vigorous on its native northern mountains(a). It is naturally a biennial plant; but if the ſtalks are cut down before they have run to flower, the roots ſend forth new heads, and may thus be continued for many years. The roots are in greateſt perfection in the ſecond ſpring: they ſhould be thoroughly dried, kept in a very dry place, and frequently aired, otherwiſe they are apt to grow mouldy, and to be preyed upon by worms.

The roots of angelica are one of the principal aromatics of European growth, though not much regarded in the preſent practice. They have a fragrant agreeable ſmell, and a bitteriſh pungent taſte, mixed with a pleaſant ſweetiſhneſs, glowing upon the lips and palate for a long time after they have been chewed. On wounding the freſh root early in the ſpring, it yields, from the inner part of the bark, an unctuous yellowiſh odorous juice, which, gently exſiccated, retains its fragrance, and proves an elegant aromatic gummy-reſin. On cutting the dry root longitudinally, the reſinous matter, in which the virtue and flavour of the angelica reſides, appears concreted into little veins (a). In this ſtate, it is readily and totally diſſolved by rectified ſpirit, and tinges the menſtruum of a bright golden colour: on diſtilling off the ſpirit from this ſolution, very little of the flavour of the angelica ariſes with it, nearly all the active matter of the root remaining concentrated in the extract. Water gains alſo from this root a pretty deep yellow colour, but extracts little of its taſte or ſmell: in diſtillation with water, there ariſes a ſmall portion of eſſential oil, of an highly pungent taſte, and ſmelling ſtrongly of the angelica: the remaining decoction, thus diveſted of the aromatic matter of the root, is nauſeouſly ſweetiſh and ſubacrid.

(a) *Suenſka vetenſk. acad. handl.* 1754.

The other parts of the plant have the ſame kind of taſte and flavour with the roots, but their active principles are far more periſhable. The ſeeds, which come the neareſt to the roots, can ſcarce be kept till the ſpring after they have been gathered, without the loſs of their vegetative power, as well as a diminution of their medicinal virtue: the leaves loſe greateſt part of their virtue on being barely dried. For ſome purpoſes, however, they are well adapted: the freſh leaves, as well as the ſeeds, on being diſtilled with water, give over to the liquor the whole of their aromatic matter, which in this form proves ſufficiently durable: ſome of the officinal diſtilled waters are flavoured with theſe materials, and the committee of the London college report, that after trial of ſundry others, for removing the diſagreeable flavour which the addition of vinegar communicates to ſpirituous waters, angelica was found to anſwer this end the moſt effectually. The virtue of the ſeeds, like that of the roots, is extracted very imperfectly by water, and completely by ſpirit; and though it riſes totally in diſtillation with water, is left by ſpirit, almoſt entire, in the inſpiſſated extract: the ſpirituous tincture is of a bright ſtraw colour, the watery infuſion of a dark brown.

Caules angelicæ conditæ *Pharm. Lond.*

The ſtalks, candied with ſugar, make an agreeable ſweetmeat.

ANIME.

ANIME Pharm. Edinb. (b) *Reſina courbaril.* Anime: a tranſparent amber-coloured reſin, exuding from the trunk of a large tree growing in Brazil and New Spain; *Hymenæa Courbaril Linn.* A finer ſort is ſaid to be ſometimes brought from the eaſtern countries; but in the ſhops, only the American is met with, of different degrees of purity: the ſmall tears are generally the pureſt; the larger maſſes being often full of earth, agreeably to Piſo's account, that the liquid juice, running down from the tree, ſinks into the ground, and is thence afterwards dug up.

(a) Grew, *idea of philoſophic. hiſt. of plants*, §. 41.

(b) Expunged.

Anime has a light pleaſant ſmell, and little or no taſte. It is readily friable between the teeth, but on long chewing ſoftens and ſticks together. Laid on a red-hot iron, it immediately melts, catches flame, and burns quickly away, with a fragrant ſmell, leaving only a ſmall quantity of whitiſh aſhes. It gives out little or nothing to aqueous liquors, but diſſolves entirely in rectified ſpirit: the ſolution is of a yellow colour, ſmells agreeably of the anime, and has a warm pungent bitteriſh taſte. The fragrance of this reſin ariſes totally in diſtillation with water, and in part with ſpirit: on diſtilling with water a large quantity of anime, a ſmall portion of eſſential oil is obtained.

The Brazilians are ſaid to employ anime in fumigations for pains and aches proceeding from cold; and in liniments or plaſters for paralytic complaints, bruiſes, *&c.* With us, it is rarely, if ever, made uſe of for any medicinal purpoſe.

ANISUM.

ANISUM Pharm. Lond. & Edinb. Apium aniſum dictum ſemine ſuaveolente Tourn. Pimpinella Aniſum Linn. Anise: a ſmall annual umbelliferous herb; producing roundiſh ſtriated ſeeds, flatted on one ſide and pointed at one end, of a pale colour inclining to a green. The upper leaves are divided into fine ſegments; the lower entire, roundiſh, and ſerrated about the edges. This plant, ſaid to be a native of Egypt, Syria, and other places of the eaſt, is cultivated, for medicinal and culinary uſes, in the ſouthern parts of Europe: it is raiſed alſo in ſome of our gardens, but ſeldom brings its ſeeds to perfection in this climate. The ſeeds brought from Spain, which are diſtinguiſhed from thoſe of other countries by being ſomewhat ſmaller, are accounted the beſt.

Aniseeds have an aromatic ſmell, and a pleaſant warm taſte accompanied with a degree of ſweetneſs. They are of common uſe, as a warm carminative, in flatulent colics, in the gripes to which young children are ſubject, in flatulent pains and obſtructions of the breaſt, in weakneſs of the ſtomach and indigeſtion, in diarrhœas, and for ſtrengthening the tone of the viſcera and inteſtines in general: they are ſuppoſed to be in theſe intentions the moſt effectual of the warm ſeeds. They are ſometimes taken in powder, from a ſcruple to a dram; and in ſome places entire, candied with ſugar.

They totally give out their virtue to rectified ſpirit, the ſeeds, after the action of this menſtruum, proving inodorous and inſipid: the tincture is of a bright lemon colour, and taſtes very agreeably. The ſpirit, diſtilled off from the filtered tincture, has a light taſte of the ſeeds, but leaves far the greateſt part of their virtue behind in the extract, which proves a very pleaſant, ſweetiſh, moderately warm, and not very pungent aromatic. In all theſe preparations made with rectified ſpirit, the peculiar ſmell of the aniſeeds, to ſome perſons offenſive, is in great meaſure covered by the ſpirit.

Infuſed in water, they impart a little of their ſmell, but ſcarcely any taſte: in diſtillation they give over the whole of their flavour, the remaining decoction having nothing of the peculiar ſcent or taſte of the aniſeeds. Along with the water ariſes an eſſential oil, to the quantity of an ounce or more from three pounds. This oil, in colour yellowiſh, congeals, even when the air is not ſenſibly cold, into a butyraceous white concrete. Its ſmell, which exactly reſembles that of the aniſeeds, is extremely durable and diffuſive; its taſte milder and leſs pungent than that of almoſt any other diſtilled vegetable oil: twenty drops may be taken for a doſe, though common practice rarely goes beyond half that number: it is recommended chiefly in diſorders of the breaſt, and ſaid to be leſs effectual in flatulencies and colics, than the ſeeds in ſubſtance. Geoffroy obſerves, that milk, drawn from the breaſt ſoon after the oil has been taken, is found impregnated with its ſmell.

Ol. eſſentiale ſem. aniſi *Ph. Lond. & Edinb.*

Theſe ſeeds yield an oil likewiſe upon expreſſion, of a greeniſh colour, in taſte grateful, and ſtrongly impregnated with the flavour of the ſeeds: ſixteen ounces, lightly moiſtened by expoſure to the ſteam of boiling water, are ſaid to afford one ounce. This oil is compoſed of a groſs, inſipid, inodorous one, of the ſame nature with the common expreſſed oils; and of a part of the eſſential oil of the ſeed, on which its flavour depends. On digeſting the compound in rectified ſpirit, the odorous oil is extracted; in diſtillation with water it is elevated, ſo as to leave the other by itſelf inodorous and inſipid. The groſs oil appears to reſide in the kernel of the ſeed, the eſſential in the cortical part.

Among the aromatics, of ſimilar intention, that have been tried in compoſition with aniſeeds, thoſe of angelica ſeem the beſt adapted to improve their flavour. A ſpirituous water prepared from a mixture of equal parts of the two, by drawing off a gallon of proof ſpirit from half a pound of each of the ſeeds, is commonly kept in the ſhops, and proves a ſufficiently elegant carminative cordial.

Aqua ſem. aniſi compoſita *Ph. Lond.*

ANISUM STELLATUM.

ANISUM STELLATUM, ſeu ſinenſe & philippenſe, & ſemen badian Pharm. Pariſ. Fœniculum ſinenſe; Cardamomum ſiberyenſe. Zingi. INDIAN OR STELLATED ANISE: a fruit or ſeed veſſel; conſiſting of ruſty brown coloured hard wrinkled capſules, half an inch or more in length, joined together by the baſes, to the number of ſix or more, in the form of a ſtar; each of which includes one ſeed or kernel, externally gloſſy and of the colour of linſeed, internally white. It is the produce of a ſmall tree, growing in Tartary, China, and the Philippine iſlands, called by Plukenet *euonymo affinis philippinarum inſularum, aniſum ſpirans, nuculas in capſulis ſtelliformiter congeſtis proferens:* by Linnæus, *Illicium aniſatum.*

THE capſules or huſks of the ſtellated aniſe have a fragrant ſmell, and a ſweetiſh glowing, not fiery, aromatic taſte, reſembling thoſe of the common aniſeeds, or rather of a mixture of aniſeeds and fennel-ſeeds, but ſtronger, and more agreeable. The ſeeds are ſaid by ſome to have neither taſte nor ſmell: of ſmell they have very little; but in chewing they fill the mouth with an agreeable aromatic flavour, of the ſame kind with that of the huſks, but weaker, and accompanied with a greater ſweetneſs.

The ſeeds afford, in diſtillation with water, the largeſt quantity of eſſential oil; and the huſks, on being treated with ſpirit, yield the moſt acrid reſinous extract (a). The oil is more limpid, and ſubtile, as well as more fragrant, than that of the common aniſeeds (b); and the

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(a) Cartheuſer, *fundamenta m. m.* ii. 327.

(b) Geoffroy, *m. m.* ii. 470.

ſpirituous extract much warmer and more pungent. Infuſions of the huſks in water, diveſted of their more volatile parts by evaporation, leave an extract ſlightly aromatic, amounting to twice the quantity of that obtained by ſpirit, or half the quantity of the huſks themſelves *(a)*.

Theſe ſeeds are employed in the eaſtern countries, and in ſome parts of Europe, in preference to the common aniſeeds, to which they appear, from their ſenſible qualities, to be ſuperiour. They have not as yet been received in practice among us, and are very rarely to be met with in the ſhops.

ANTHORA.

ANTHORA Pharm. Pariſ. Antithora. Aconitum ſalutiferum ſive anthora C. B. Aconitum Anthora Linn. YELLOW HELMET FLOWER: a plant with divided leaves, and naked flowers conſiſting of five petals, the uppermoſt of which is ſhaped like a hood: each flower is followed by three or more pods, containing wrinkled angular ſeeds. It is diſtinguiſhed from the other aconites or wolfsbanes, by the leaves not being gloſſy, by their being cut quite down to the pedicle, and by the ſegments being very narrow and of nearly the ſame width from end to end.

This plant is a native of the Alps and Pyreneans, from whence the dried roots are ſometimes brought to us. They are generally of an irregular roundiſh ſhape, ſometimes a little oblong, of a brown colour on the outſide and white within, hard to break, but not tough.

THE root of anthora has a faint ſmell, and an acrid bitter taſte, conſtringing the fauces and throat, accompanied with a kind of nauſeous ſweetiſhneſs. Its medical qualities are doubtful. Some *(b)* look upon it as a ſafe anthelmintic, an uſeful alexipharmac in malignant fevers, and even as an antidote to the poiſonous aconites, particularly the ſpecies called *thora*, from its ſuppoſed efficacy againſt which it is ſaid to have received its name: others *(c)* aſcribe to it virulent qualities, and relate inſtances of its occaſioning vomiting, purging, great diſorders of the ſtomach, heat, thirſt, and anxiety. A competency of experiments, to fully determine this point, is as yet wanting: poſſibly this root, like

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(a) Cartheuſer. *(b)* Geſner, *epiſt. p.* 66 & 142. Geoffroy, *mat. med.* ii. 11.

(c) J. Bauhin. *hiſt. plant. p.* 94. L'Obel, *adv. p.* 301. Hoffman, *de medicament. inſecur.* §. 30.

many others, may be poſſeſſed of noxious qualities when freſh, which are in great meaſure diſſipated or deſtroyed by drying or long keeping. But as all the ſalutary effects, that can be rationally expected from this drug, are obtainable from medicines of known innocence; common practice has never received the anthora, and the colleges both of London and Edinburgh have now expunged it from their catalogues of officinals.

ANTIMONIUM.

ANTIMONIUM Pharm. Lond. Antimonium, ſtibium, Pharm. Edinb. ANTIMONY: a ponderous brittle mineral, compoſed of long ſhining ſtreaks like needles, intermingled with a dark leaden coloured ſubſtance; of no manifeſt taſte or ſmell. It is uſually brought into the ſhops in the form of conical loaves.

There are ſeveral mines of antimony in Germany, Hungary, and France, and ſome likewiſe in England. It is ſometimes found tolerably pure, but more commonly blended with a hard ſtone or ſpar, from which the antimony is ſeparated by eliquation. The mineral being broken in pieces, put into earthen pots whoſe bottoms are perforated with ſmall holes, and a moderate fire applied round the veſſels, the antimony melts out, and is received in conical moulds placed underneath. In theſe, the lighter and more droſſy matter riſes to the ſurface, while the purer and more ponderous ſubſides to the bottom: hence the upper broad part of the loaves is conſiderably leſs pure than the lower. The antimony, thus purified, is called *crude,* in diſtinction from its officinal preparations.

In ſome places the native mineral has been employed without purification. The maſſes which have ſuffered fuſion may be readily diſtinguiſhed, by the form which they receive from that operation; by their being free from any viſible ſtony matter, pieces of which are generally found adhering to the unwrought ore; and by their ſtriæ being larger. The Engliſh antimony appears to be, of all the ſorts, the moſt unfit for medicinal uſe, as having ſometimes an admixture of particles of lead ore, of which I have ſeen ſpecimens.

ANTIMONY was employed by the ancients in collyria againſt inflammations of the eyes, and for ſtaining the eye-brows black. Its internal uſe does not ſeem to have been eſtabliſhed till towards the end of the fifteenth century, and even then it was by many looked upon as poiſonous. Experience has now fully evinced, that in its crude ſtate, or when duly prepared, it is a medicine of ſufficient ſafety, and of great efficacy in ſundry obſtinate diſorders, and that though ſome of its preparations are moſt violently cathartic and emitic, yet even theſe, by a ſlight alteration or addition, loſe their virulence and become mild.

Antimonial medicines are principally made uſe of, as alterants, deobſtruents, or gentle evacuants; in cutaneous foulneſſes not ſcorbutic; in rheumatic pains and contractions of the limbs (a); in leucophlegmatic, cachectic, and catarrhous diſorders; in intermittent fevers from obſtructions of the viſcera, as obſtinate quartans; and ſometimes in continual fevers, and for promoting expectoration in peripneumonic and aſthmatic caſes: they generally have better effects in cold ſerous habits, than in hot bilious diſpoſitions. The more active preparations are employed as emetics in apoplectic and maniacal diſorders. It is obſervable, that even the ſtrongeſt antimonials, the cauſtic ſolutions in mineral acids excepted, are given to horſes in large quantity, ſome ounces a day, without any ill effect: in theſe animals, both crude antimony and its preparations ſeem to operate by promoting perſpiration.

The virulent effects, which antimony produces in certain circumſtances, have been aſcribed by many to its participating of an arſenical ſubſtance (b). But the chemical properties of antimony, alledged in proof of this ſuppoſition, are by no means characteriſtic of that poiſonous mineral; and its operation in the human body is extremely different. The moſt violent antimonials are rendered inactive by means which do not leſſen the deleterious quality of arſenic; and ſome act with violence in far leſs doſes than pure arſenic itſelf.

Regulus antimonii.

CRUDE antimony is properly an ore, or a combination of a particular metal with common ſulphur. The metallic part, like that of other ſulphureous ores, is ſeparated in its proper form, by roaſting the powdered mineral over a gentle fire till the ſulphureous fumes ceaſe, and then melting the remaining grey calx with inflammable fluxes. The flux commonly uſed for theſe purpoſes by the chemiſts, called from its colour *black flux*, is compoſed of two parts of crude tartar and one of nitre, ground together, ſet on fire, and burnt in a covered veſſel to a blackiſh alkaline coal.—The ſulphur alſo may be obtained in its pure ſtate, by digeſting the powdered mineral in aqua regis, which diſſolves the metallic part, leaving the ſulphur in form of a greeniſh yellow ſubſtance: this, purified by ſublimation, appears, on all trials, the ſame with common brimſtone. The proportions of ſulphur and metal vary in different antimonies; ſome ſorts ſeem to hold about two parts of metal to one of ſulphur, and others nearly equal parts of each.

(a) Two remarkable caſes of the efficacy of antimony in pains and in inveterate contractions of the limbs, are related by Kunckel in his *laboratorium chymicum*, 3 *theil*, 32 *capit.*

(b) Neumann, *chym. med. dogmat. experimental.* ii. 339. Hoffman, *metallurg. morbif.* §. 21. Stahl, *menſ. Decemb. cap.* 3. *opuſc. p.* 486. 491.

Sulphur antimonii verum.

The pure metal, called *regulus* of antimony, is of a bright white colour, a plated or leafy texture, very brittle, nearly ſeven times ſpecifically heavier than water. It melts in a low white heat, and if continued in fuſion, in an open veſſel, gradually exhales in thick whitiſh fumes, which condenſe, on the bodies adjacent, into white flowers. Melted with common brimſtone, it becomes ſimilar, both in appearance and quality, to crude antimony. Crude antimony, like moſt other ſulphureous ores, is eaſier of fuſion than its pure metal: it melts before it grows red-hot, though not before the veſſel is conſiderably ſo.

It is in this metallic part of antimony, that its proper medicinal powers reſide. The pure metal is a medicine of extreme activity: a quantity too minute to be ſenſible on the tendereſt balance, is capable of producing violent effects if given diſſolved or in a ſoluble ſtate. Acid wines take up ſo little of it, that the metal, after a number of infuſions, ſeems to have loſt nothing of its weight: theſe tinctures, nevertheleſs, prove, in moderate doſes, ſtrongly emetic or cathartic; and in very ſmall ones, for the moſt part diaphoretic. It has been caſt into the form of ſmall pills, which acted as violent cathartics, and after their paſſage through the body have operated in the ſame manner again, and this repeatedly for a great number of times.

THE activity of this metal is abated by calcination, or by the expulſion of the inflammable principle, which makes a conſtituent part of this as of other metallic bodies: when thoroughly calcined, it appears entirely inert. Thus, if ground with twice or thrice its weight of nitre, and thrown by little and little into a red-hot crucible, it ſlightly deflagrates, and being now freed from the ſaline matter by ablution with water, is found

Ceruſſa antimonii.

found changed into a perfect white calx, which though taken in doſes of a dram or two, is ſaid to have no ſenſible operation. In this deflagration, a part of the nitre is alkalized, and a portion of the calx diſſolves in the water along with the alkali, as generally happens in the calcination of other metallic bodies with nitre: acids, added to this ſolution, precipitate the diſſolved calx in form of a ſubtile white powder, which is equally inactive with the undiſſolved part. Theſe perfect calces, of themſelves fixt and unfuſible in the fire, melt with ſaline additions, as fixt alkaline ſalt and borax, into a pale yellowiſh glaſs, inert *(a)* as the calces at firſt.

Materia perlata.

The preciſe gradations of activity, between the virulence of the metal in its perfect metallic ſtate, and its indolence in that of a perfect calx, are not well known; but thus much is certain, that it continues extremely active till the calcination is almoſt complete. When crude antimony is roaſted over a gentle fire and kept conſtantly ſtirring, till the ceſſation of the fumes ſhews the ſulphur to be diſſipated, the metal remains in form of a greyiſh-white powder, ſo far calcined, that on being urged with a ſtrong fire, it melts into a dark yellowiſh red glaſs, no part of it reſuming its metallic form. Neverthelefs, both the calx and the glaſs are very virulent emetics; differing, however, from the metal itſelf, in this, that their active parts are ſoon exhauſted by repeated infuſion in vegetable acids *(b)*, whereas the metal, ſo far as the experiment has been carried, ſeemed to loſe nothing of its power.

Vitrum antimonii *Ph. Edinb.*

THE activity of the metal is reſtrained likewiſe by the combination of ſulphur with it. Crude antimony, a natural mixture of it with ſulphur, is altogether mild; doſes of half a dram, or a dram, for the moſt part only gently looſening the belly, or promoting inſenſible perſpiration: the greater degree of tenuity the powdered mineral is reduced to, the more conſiderable are its effects; and the caſe appears to be the ſame in regard to all the antimonials that are not totally diſſoluble in the animal fluids.

If a part of the ſulphur of the antimony be ſeparated, by ſuch operations as do not calcine the metal, the remaining maſs proves proportionably more active. Hence, as different ſorts of crude antimony, and different parts of one and the ſame maſs, hold manifeſtly

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(a) Malouin, *chimie medicinale, part* iv. *chap.* 50.

(b) Boerhaave, *elem. chem. proceſſ.* 210.

different proportions of ſulphur, it is probable that they vary in degree of activity.

The ſulphur of antimony is ſeparated by deflagration with nitre: the greater the quantity of nitre, to a certain point, the more of the ſulphur is conſumed, and the more does the metal, thus diveſted of its corrector, exert its virulence. An increaſe of the nitre, beyond the quantity which is ſufficient to ſeparate the ſulphur, renders the products, contrariwiſe, milder and milder; by more and more calcining, or deſtroying the powers of, the metal itſelf.

Thus, antimony deflagrated with *one eighth* its weight of nitre, is ſaid to act chiefly, in doſes of fifteen or twenty grains, as an alterative or diaphoretic: with *one ſixth* its weight, it vomits and purges, for the moſt part very mildly, in doſes of eight or ten grains: with *half* its weight, it vomits ſtrongly, in the quantity of from one to five or ſix grains; and with *equal* its own weight[†], it proves, in the ſame doſes, a moſt violent emetic, operating as it were inexhauſtibly, till its whole ſubſtance is expelled. All theſe preparations are of a dark red or yellowiſh red colour, and hence perhaps their name of crocus or ſaffron. The three firſt are taken from the fire as ſoon as the deflagration ceaſes: the laſt, which is the officinal crocus, is kept for ſome time in fuſion, during which a whitiſh ſaline ſcoria riſes to the ſurface, which is ſeparated when the maſs grows cold.

Crocus antimonii medicinalis.

Crocus antimonii mitior *committ. of Lond. col.*

[†] Crocus antimonii *Ph. Lond.& Edin.* metallorum *vulgo:* Hepar antimonii *quibuſdam.*

The laſt of the above proportions of nitre, to wit, *equal* the weight of the antimony, ſeems to be nearly that by which all the ſulphur is deſtroyed, and the metallic part left bare. If the nitre be increaſed to *twice* the weight of the antimony, the metal itſelf is ſo far calcined by it, as to appear, after the deflagration, white; and if now freed from the ſaline matter by ablution with water, proves ſo mild, as to occaſion only ſome light nauſea and gentle vomiting, with a large diſcharge of ſaliva and thick urine. If the antimony be treated in the ſame manner with *thrice* its weight of the ſalt, it becomes a perfect indolent calx, the ſame with that obtained by calcining the pure metal with nitre.

Emeticum mite antimonii *Boerhaave.*

Calx antimonii *Phar. Lond.* Antimon. diaphoret. *vulgo.* Anodynum minerale *Phar. Brand.*

In this deflagration, a part of the nitre is changed by the ſulphur into a neutral ſalt ſimilar to that prepared from pure ſulphur and nitre deflagrated together, that is, to the *nitrum vitriolatum:* this ſalt may be recovered from the water in which the calx is waſhed, by filtration, evaporation, and cryſtallization. A part of the nitre becomes likewiſe an alkaline ſalt, which, as formerly obſerved, renders a part of the metallic calx diſſoluble: the cryſtallized ſalt is found to retain a little of this calx, but cannot be expected to receive from thence any particular virtues.

Calx antimonii nitrata *Ph. Edinb.*

* The Edinburgh college, in their laſt pharmacopœia, direct the grey calx of antimony, as prepared for making the glaſs, to be calcined for an hour with equal its weight of nitre, and the mixture then to be waſhed with warm water till it becomes taſteleſs.

Febrifugum craanii *Ph. Brand.*

THE ſulphur of antimony is ſeparated alſo by fuſion with fixt alkaline ſalts, which abſorb it, and form with it a ſcoria on the ſurface. On melting five parts of antimony, with one of ſalt of tartar, and four of ſea ſalt, which laſt does not appear to be of any great uſe in the proceſs, a ponderous dark reddiſh maſs is obtained, which, ſeparated from the ſcoria, is found to be ſimilar in quality to the crocus prepared with one eighth of nitre; about as much of the ſulphur being here abſorbed and ſcorified by the alkali, as is there burnt off by the nitre. This preparation is greatly celebrated by Hoffman and others, in ſundry obſtinate chronical diſorders, and eſteemed one of the beſt antimonials that can be given with ſafety as alterants: it operates chiefly as a diaphoretic, and ſometimes, though rarely, by ſtool or vomit; the doſe is from three or four grains to a ſcruple.

If eight parts of antimony, ſix of tartar, and three of nitre, be mixed together, deflagrated, and brought into fuſion, the alkaline ſalt, reſulting from the nitre and tartar, will abſorb the whole of the ſulphur of the antimony, and the metallic part will fall pure to the bottom. Only a ſmall quantity, however, of the metal ſeparates in this proceſs; for as ſoon as the alkali and ſulphur are combined together, this compound begins to diſſolve and ſcorify the metal, and ſcorifies more and more of it in proportion to the continuance of the fire; if the pure metal be melted with a compoſition of ſulphur and alkali, it is in like manner changed into a ſcoria.

Sulphur antimonii præcipitatum *Pharm. Lond.*

Theſe alkaline ſcoriæ diſſolve in boiling water; and on adding acids, as ſpirit of ſalt, to the filtered ſolution, the ſulphur and metal are precipitated together, in form of a reddiſh or reddiſh-yellow powder.—A like ſolution may be obtained by boiling crude antimony in alkaline lye: which, like the alkaline ſalts brought into fuſion by fire, firſt diſſolves the ſulphur, and then, by the mediation of this, takes up a very conſiderable part of the metal: the college of Edinburgh directs two pounds of powdered antimony to be boiled in two quarts of ſoap lyes diluted with three pints of water, the matter being kept ſtirring with an iron ſpatula, and freſh water occaſionally added to ſupply that which evaporates, for three hours; and the precipitation to be made by dropping diluted ſpirit of nitre into the ſtrained liquor whilſt hot: if the ſolution is ſuffered to cool, a ſpontaneous precipitation happens.—It is probable, that when the ſolution is thus procured by boiling in lye, the precipitate will be of more uniform ſtrength, or vary leſs in the quantity of metal, than when the antimony and alkaline ſalt have been melted together; and that the precipitate, thrown down by acids, will be leſs variable than that which is permitted to ſeparate ſpontaneouſly. In either caſe, however, the powder, which falls firſt, proves darker coloured, contains more of the metal, and operates with more force, than that which ſubſides afterwards. The uſing of the nitrous, marine, or vegetable acids, for the precipitation, is indifferent to the medicine; but the vitriolic might occaſion a variation; the neutral ſalt, reſulting from the coalition of this acid with the alkali, being leſs ſoluble in water, and not eaſily ſeparable from the precipitate by waſhing.—Theſe precipitates, waſhed from as much of the adhering ſaline matter as hot water will diſſolve, prove gently emetic, in doſes of five or ſix grains, when taken on an empty ſtomach. Made into pills with extracts or reſins, and taken on a full ſtomach by a little at a time, they act chiefly as alteratives and deobſtruents: with theſe cautions, I am told, they have been increaſed to ſixteen grains a day, without occaſioning any diſturbance upwards or downwards.

Sulph. aurat. antim. *Ph. Edinb.*

Kermes mineral. *vulgo.*

The alkaline ſcoriæ of antimony, pulverized whilſt hot, and digeſted for three or four days in rectified ſpirit of wine, communicate the ſame colour, taſte, and ſmell, as a mixture of pure ſulphur with alkalies. The colleges both of London and Edinburgh judge, contrary to what ſome have ſuppoſed, that a part of the metal, as well as of the ſulphur, is taken up by the ſpirit: the former direct a tincture to be drawn, with a quart of ſpirit, from ſix ounces of powdered antimony melted with twelve of any fixt alkaline ſalt; the latter, from four ounces of antimony and ſix of alkali *(a)*. It is ſaid that theſe tinctures, taken on an empty ſtomach, have ſometimes proved emetic.

Tinctura antimonii *Ph. Lond. & Edinb.*

(a) This preparation is now expunged from the Edinburgh Pharmacopœia.

The ſulphur of antimony is abſorbed likewiſe by moſt of the metals; moſt freely by iron. For this purpoſe, ſome iron nails, wire, or other like ſmall pieces that may lie looſe in the crucible, are heated to a ſtrong red heat, and about twice their quantity, or a little more, of antimony thrown upon them: the ſulphur of the antimony immediately acts on the iron, and as ſulphur greatly promotes the fuſion of that metal, the whole ſoon melts: a little nitre is then injected, about one part to ſix of the antimony, the crucible covered again, and the matter, when brought into thin fuſion, poured into a warm greaſed cone or mortar. The regulus, freed from the ſulphureo-ferrugineous ſcoriæ, is purified by repeated fuſion with one ſixth or one eighth its weight of freſh nitre, till the nitre no longer receives from it any yellow or amber colour: if the regulus diſcovers, by its dull grey colour, ſpongineſs, hardneſs, and difficulty of fuſion, that it retains much of the iron, a little freſh antimony is injected, whoſe ſulphur, abſorbing the iron, haſtens the purification. If the metal when poured out be in exceeding thin fuſion, and the quantity of ſcoriæ covering its ſurface conſiderable, it generally aſſumes on the top a radiated ſtar-like efflореſcence.

Regul. antim. martialis.

Regul. antim. ſtellatus.

This regulus, though venerated by ſome of the chemiſts, is not materially different from that obtained by ſimply calcining the antimony, and reviving the calx with inflammable fluxes.—The ſcoriæ reſulting from the firſt fuſion with iron are little other than a ſulphurated iron, ſcarcely retaining any thing of the metallic part of the antimony: expoſed to the air, in a ſhady place, they fall into a black powder, whoſe finer parts, waſhed off with water, and deflagrated with thrice their weight of nitre, are Stahl's aperient crocus†: the groſſer part, treated in the ſame manner, is ſaid to be not aperient, but enormouſly aſtringent‡ *(a)*.—The amber coloured ſcoriæ, ariſing in the purification of the regulus with nitre, are an exceſſively ſtrong cauſtic alkali||; powdered and thrown whilſt hot into highly rectified ſpirit of wine, they impart, by digeſtion and agitation, a deeper or paler red colour§, according as the ſpirit was more or leſs oily, together with a penetrating pungency, and, as is ſuppoſed, a detergent and diuretic virtue *(b)*.

† Crocus martis aperitivus Stahlii.
‡ Crocus martis aſtringens Stahlii.
|| Nitrum cauſticum, Scoria reguli ant. ſuccinea.
§ Tinct. antimonii acris *Ph. Brand.* &c.

The metallic part of antimony is corroded by the nitrous and vitriolic acids, into a white powder; and totally diſſolved by aqua regia, if made

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(a) Stahl, *menſ. Januar. Opuſc. p.* 523.

(b) Stahl, *menſ. Decemb. Opuſc. p.* 505.

with only a ſmall proportion of nitrous acid, into a corroſive liquor. It may likewiſe be combined with the marine acid into a liquid form, by particular methods of application. If corroſive mercury ſublimate (a combination of mercury with the concentrated marine acid) be mixed in powder with half its weight of powdered antimony; the acid of the ſublimate begins immediately to act upon the metallic part of the antimony, and fumes, extremely noxious, ariſe ſo copiouſly, that the utmoſt circumſpection is requiſite for avoiding them: the mixture being ſet to diſtil in a wide necked retort, with a fire cautiouſly increaſed, the antimonial regulus ariſes, combined with the acid into a thick cauſtic liquor, which congeals, in the neck of the retort, in appearance like ice. This concrete, expoſed for ſome time to the air, imbibes moiſture and becomes fluid†: it may likewiſe be melted down from the neck of the retort by cautiouſly applying a live coal, and afterwards rendered permanently fluid by diſtillation‡ in another retort: when liquefied in the firſt way, it is ſomewhat leſs corroſive than in the other. The uſe of this butter, as it is called, is for conſuming fungous fleſh, and the callous lips of ulcers: it acts exceeding quickly, producing an eſchar, which, as Boerhaave obſerves, generally ſeparates the ſame day it is formed.

† Cauſticum antimoniale *Pharm. Lond.*
‡ Butyrum antimonii *Ph. Edinb.*

The butter, diluted with a large quantity of water, grows milky, and depoſites its metal, intimately combined with a portion of the concentrated acid, in form of an exceeding white powder. The powder, repeatedly waſhed with water, becomes inſipid, but ſtill retains a portion of the acid, and operates, in the doſe of two or three grains, as a moſt violent and dangerous emetic.

Mercurius vitæ.

Spirit of nitre dropt into butter of antimony, ſo long as it occaſions any efferveſcence, forms with the marine acid of the butter an aqua regia, which keeps the metal perfectly diſſolved. If this ſolution be committed to diſtillation, the marine acid comes over firſt, and a little of the nitrous after it: the reſt of the nitrous acid may be totally expelled from the remaining powder, by calcining it in a crucible for half an hour or more with a ſtrong red heat. Spirit of nitre, poured on the mercurius vitæ, in like manner expels the marine acid, and is itſelf expelled by fire. The calces thus obtained, though formely looked upon as medicines of great virtue, are equally inactive with thoſe, which are more compendiouſly prepared by deflagrating crude antimony with thrice its weight of nitre.

Bezoardicum minerale.

After the diſtillation of the butter of antimony, there remains in the retort a black powder, compoſed of the mercury of the ſublimate and the ſulphur of the antimony. This, like the ethiops made from mercury and ſulphur directly, on being urged with a red heat, ſublimes into a cinnabarine maſs, generally darker than the common cinnabar, and ſomewhat of a needled ſtructure. It has been ſuppoſed that this cinnabar participates of the metallic matter of the antimony; but experiment ſhews that it does not, and that its difference from common cinnabar conſiſts wholly in its containing a larger proportion of ſulphur. Common cinnabar, ſublimed with a little freſh ſulphur, becomes exactly ſimilar to that of antimony; and cinnabar of antimony, ſublimed from a little iron filings, or ſuch other ſubſtances as may detain its ſuperfluous ſulphur, becomes the ſame with common cinnabar.

Cinnabaris antimonii *Pharm. Lond.*

Crystals of tartar, boiled in water with the pure regulus, or crocus, or glaſs of antimony, diſſolve a part of the metallic matter, ſmall indeed, but ſufficient to communicate a ſtrong medicinal impregnation: the glaſs is ſaid to diſſolve more eaſily, and in greater quantity, than the other preparations. The college of London directs half a pound of crocus of antimony (reduced to a ſubtile powder, and boiled and waſhed with water till it becomes perfectly inſipid) to be boiled with an equal quantity of cryſtals of tartar, in three pints of water, for half an hour; the liquor to be filtered, and after due evaporation ſet by to cryſtallize. The Edinburgh college orders ſix ounces either of the waſhed crocus, or powdered glaſs, and four of creme of tartar, to be boiled in four quarts of water for ſix hours; the liquor to be filtered when cooled, and either cryſtallized or evaporated to dryneſs.

Crocus antimonii lotus *Ph. Lond.*

Tartarum emeticum *Ph. Lond. & Edinb.*

The total evaporation of the fluid appears the beſt way of ſecuring uniformity of ſtrength to the medicine: for as only a part of the tartar is ſaturated with the metal, and as the part thus ſaturated is more ſoluble than the reſt, ſome of the unſaturated tartar is apt, in cryſtallization, to ſhoot by itſelf. The ſolubility of the compound affords one of the beſt means for eſtimating its ſtrength, or the degree of its impregnation with the antimony. Dr. Saunders relates (a) that an ounce of cold water, about the middle temperature of the air, diſſolved, of ſome of the common emetic tartars of the ſhops, not thirty-two grains, or one fifteenth its own weight; whereas, of a well ſaturated ſort, which he had himſelf prepared by long boiling, the ſame quantity of water diſſolved fifty-two grains, or near one ninth its weight. Perhaps the moſt certain way of obtaining a ſaturated and uniform preparation of this kind would be, to digeſt the common emetic tartar in eight times its weight, or leſs, of cold water, and evaporate the filtered yellow ſolution to dryneſs: or to continue the boiling of the glaſs of antimony and tartar for twelve hours or longer, adding water enough occaſionally to keep the tartar always diſſolved, and at length to let the water waſte ſo far, as not to exceed eight times the quantity of the tartar employed, after which the liquor is to be ſuffered to cool, and then filtered and evaporated.

(a) *Diſſertatio medico-chemica inaugural. de antimonio, p.* 44.

This preparation is one of the beſt of the antimonial emetics; as containing the active part of the antimony, made ſoluble by a mild vegetable acid, which does not, like thoſe of the mineral kingdom, communicate any degree of corroſiveneſs: the doſe is from two or three to ſix or eight grains. It may be given alſo as an alterative or diaphoretic, in doſes of a quarter of a grain or half a grain or more; and added, in the quantity of a grain or two, as a ſtimulus to the milder vegetable cathartics. It is ſaid that caſia diminiſhes the power of this medicine, but probably on no good foundation.

Vinum antimoniale *Ph. Lond. & Edin.*

Moſt ſorts of vinous liquors contain ſo much acid, as to extract, in a ſhort time, a ſtrong impregnation from the antimonial metal. The college of London directs an ounce of the waſhed crocus to a pint and a half of mountain; that of Edinburgh, the ſame quantity of the glaſs to a pint. It does not appear, that theſe or much greater differences in the quantities, affect the ſtrength of the preparation; the ſame crocus being ſufficient to impregnate many freſh portions of liquor. Theſe tinctures have been chiefly uſed, in the quantity of half an ounce or an ounce, as ſtrong emetics: in ſmall doſes, as thirty to ſixty drops, they act commonly as diuretics or diaphoretics. A caſe is related in the Edinburgh Eſſays, Vol. II. in which the whey made with a gill and a half of antimonial wine produced ſleepineſs without vomiting. The curd had the ſame effect.

The virulence of ſome of the antimonials is greatly abated, by intimately mingling them with wax or reſins. Powdered glaſs of antimony, injected into one eighth its weight of melted bees wax, over a gentle fire, Vitrum antimonii ceratum *Ph. Edinb.*

fire, and kept conſtantly ſtirring for half an hour, becomes ſo mild, that when given from two or three grains to twenty, it occaſions for the moſt part only a few ſtools, or a ſlight nauſea or ſickneſs, and ſometimes produces no ſenſible evacuation. This preparation has for ſome time been celebrated in dyſenteries: ſeveral inſtances of its good ſucceſs in theſe caſes are related in the fifth volume of the Edinburgh medical eſſays.

From the foregoing review of the antimonial medicines, it appears, that the ſeveral preparations of this mineral, the cauſtic butter excluded, differ from one another only in degree of activity; and that the greater number muſt vary in ſtrength, from ſmall and unheeded variations in the manner of preparing them. And indeed, though their real qualities ſhould be always the ſame, they may neverthelеſs operate with different degrees of force; from the juices in the firſt paſſages, or the food taken during their uſe, occaſioning more or leſs to be diſſolved. Sometimes the milder preparations, and even crude antimony itſelf, have, from acid foods, proved ſtrongly emetic; and ſometimes the more active have lain for a time indolent in the body, and afterwards, on taking the ſlighteſt acids, ſuddenly exerted unexpected violence. Tinctures of the pure metallic part in mild vegetable acids appear to be the moſt ſafe and certain of all the antimonials; and capable of being ſo managed, as to anſwer all the ſalutary purpoſes that can be rationally expected from any preparation of this mineral; what is effected in the others, by rendering the metal more or leſs ſoluble, being here obtained, with much leſs uncertainty, by giving actual ſolutions of it in larger or ſmaller doſes. Whether the wine, recommended by Huxham, or the tartarous ſolution, is the moſt eligible, experience only can determine. It is certain that both of them, as commonly prepared, are very variable in ſtrength; the vinous ſolution, from differences in the degree of acidity, and conſequently in the diſſolving power, of the wine itſelf; the tartarous, from the proceſs being more or leſs ſkilfully performed. We ought therefore, in preſcribing theſe preparations, if we are not well aſſured of their ſtrength, to begin with a ſmall doſe, and gradually increaſe it according to the effect.

APARINE.

APARINE Pharm. Edinb.(a) Aparine vulgaris C. B. Philanthropus. GOOSEGRASS or CLEAVERS: a ſlender, rough, annual plant, ſpreading upon buſhes and ſticking to whatever it touches; with four-ſquare, brittle, jointed ſtalks; oblong narrow leaves, ſet in form of a ſtar, about eight at a joint; and ſmall whitiſh bell-ſhaped flowers, followed by little round burs.

THE leaves and ſtalks of aparine yield upon expreſſion a large quantity of turbid green juice, which when depurated becomes clear and reddiſh. The leaves in ſubſtance have no ſmell, and very little taſte: the juice alſo, in its dilute ſtate, ſeems little more than watery and herbaceous; but when inſpiſſated to the conſiſtence of an extract, it affects the organs of taſte ſtrongly, though only momentarily, with a pungent ſaline bitterneſs.

The juice of this herb has been given, in doſes of two or three ounces, as an aperient in obſtructions of the viſcera, and as a diuretic in hydropic caſes and ſuppreſſions of urine. * This medicine came into great vogue for ſcorbutic complaints a few years ago, in conſequence of a letter printed in the news-papers. It was found in ſeveral caſes to have a conſiderable effect, probably merely as a freſh vegetable juice, as its viſible operation manifeſted very little activity. It ſeems now to be again fallen into neglect.

APES.

APES Pharm. Edinb.(b) BEES. This inſect, dried and powdered, has been given internally as a diuretic, and applied externally (ground with honey or other like ſubſtances) for promoting the growth of hair. Some have ſlightly calcined the bee, in a cloſe veſſel, to blackneſs, and eſteemed it, when thus prepared, to be a medicine, in ſome caſes, of more virtue; a ſaline matter being now in good meaſure generated by the fire, though not as yet extricated from the other principles.—For my own part, I have had no experience of the bee itſelf prepared or unpre-

(a) Expunged. (b) Expunged.

pared, nor is it uſed in practice: the valuable products, which this inſect affords, honey and wax, will be treated of in their places.

APIUM.

APIUM, Eleoſelinum, Pharm. Edinb. (a) Apium paluſtre & apium officinarum C. B. Apium graveolens Linn. SMALLAGE: an umbelliferous plant, with bright green winged leaves, cut ſlightly into three roundiſh portions, ſerrated about the edges: the ſeeds are ſmall, oval, plano-convex, furrowed, of a pale browniſh or aſh colour: the root long, about the thickneſs of the finger, furniſhed with a number of fibres, of a pale yellowiſh colour on the outſide, and white within. It is biennial; flowers in Auguſt; grows wild in rivulets and watery places; and is frequently cultivated in gardens.

A poiſonous plant, the *cicuta aquatica* or water hemlock, which grows naturally in the ſame places with wild ſmallage, has been ſometimes miſtaken for it. This may be diſtinguiſhed, by its leaves being deeply divided, quite to the pedicle, into three long narrow ſharp pointed ſegments; whereas thoſe of ſmallage are only ſlightly cut into three roundiſh obtuſe ones.

THE freſh roots of ſmallage, eſpecially when produced in its native watery places, are ſuppoſed to participate, in ſome degree, of the ill quality of thoſe of the hemlock kind, and to be particularly hurtful to epileptic perſons and pregnant women. They have an unpleaſant ſmell, and a bitteriſh ſomewhat acrid taſte, weaker than thoſe of the roots of the *cicuta*, but ſo much of the ſame kind, as to countenance the ſuſpicion, that the freſh roots of wild ſmallage, if taken in conſiderable doſes, may not be entirely innocent. By drying, they loſe greateſt part of their ill flavour, and become ſweetiſh: the poiſonous quality of the *cicuta* alſo is ſaid to be abated by exſiccation.

The dry roots of ſmallage have been employed, in apozems, as aperients and diuretics, in conjunction commonly with the other aperient roots. They give out their virtue, together with a pale yellow colour, both to watery and ſpirituous menſtrua. On evaporating the watery infuſion, the flavour of the root exhales, and the remaining extract proves unpleaſantly ſweetiſh. The ſpirituous tincture, inſpiſſated, yields an extract, ſomewhat ſweeter and leſs ungrateful than that made with water, and of a ſlight warmth or pungency: the ſmell of the root, which is pretty ſtrong in the watery infuſions, is in good meaſure covered by ſpirit both in the tincture and extract.

(a) Expunged.

The ſeeds of ſmallage have been ſometimes uſed as carminatives and aperients, and appear to be poſſeſſed of greater virtues than the root. They have a moderately ſtrong grateful ſmell, and a warm bitteriſh taſte. Infuſed in water, they impart to it very little of their flavour: diſtilled with water, they yield a ſmall quantity of eſſential oil, of a very pungent taſte, ſmelling ſtrongly and agreeably of the ſeeds: the remaining decoction is unpleaſantly bitteriſh. They give out the whole of their taſte and ſmell to rectified ſpirit, and tinge the menſtruum of a yellowiſh colour: the ſpirit, diſtilled off from the filtered tincture, has very little of the flavour of the ſeeds: the remaining extract is a moderately warm, pungent, bitteriſh aromatic.

THIS plant has been greatly improved, by culture, in the ſouthern parts of Europe, and thence received in our gardens under the name of celery, *apium dulce celeri italorum Tourn.* In this ſtate, it is much paler coloured, quite white towards the roots, of a pleaſant ſweetiſh ſomewhat warm taſte, without any thing of the ill flavour of the roots and leaves of common ſmallage. Ray obſerves, that, if neglected for a few years, it degenerates into ſmallage again.

The roots of celery loſe in drying about two thirds of their weight: the matter which exhales appears to be mere water. The dried roots, digeſted in rectified ſpirit, with a heat a little below boiling, ſoon give out the whole of their active matter, and become inſipid. The tincture, which is of a yellow colour, depoſites, on ſtanding for ſome weeks, a conſiderable quantity of truly ſaccharine white flakes: inſpiſſated, it yields a whitiſh extract, of a grateful warm aromatic ſweetneſs. An extract made by water is likewiſe conſiderably ſweet, but has nothing of the aromatic warmth of the ſpirituous extract.

The ſeeds of celery are much inferiour in aromatic flavour to thoſe of ſmallage; and the ſeveral preparations of them are proportionably weaker and leſs grateful: the eſſential oil, in which the taſte and flavour are concentrated, is far leſs pungent than the oil of ſmallage ſeeds, and of very little ſmell. Thus one part of the plant degenerates in its quality, in proportion as the other is improved.

A Q U A.

AQUÆ COMMUNES. *Aqua nivalis, pluvialis, fluvialis, fontana.* Common waters: ſnow, rain, river, ſpring waters.

It is needleſs to obſerve, how much the purity of waters is conducive to health; and how greatly, though by inſenſible degrees, the human body muſt neceſſarily be affected, by minute quantities of inſalubrious matters in this univerſal diluent, and vehicle of all our aliment.

Among the common teſts of the purity of water, the leaſt fallacious are, its being perfectly colourleſs, tranſparent, and void of ſmell and taſte; its diſſolving ſoap into a ſmooth lather; boiling pulſe tender; not changing the colour of ſyrup of violets or the juices of other blue flowers; and its mingling with alkaline and with acid liquors, with ſolution of ſulphur in alkalies, and ſolution of ſilver in the nitrous acid, without precipitation or change of tranſparency. Theſe trials ſerve to diſtinguiſh, in moſt caſes, whether waters contain any conſiderable quantity of foreign matters, but what the particular matters are, they never can diſcover, different ſubſtances exhibiting, in the ſeveral experiments, ſimilar phenomena: thus blue juices are changed red by alum as well as by acids, and green by the calcareous marine ſalt as well as by alkalies.

To determine, with any degree of preciſion, the contents of waters, a quantity of the water is to be evaporated, in clean glaſs veſſels, with a heat ſcarcely exceeding that which the hand can ſupport; that the ſolid contents may be procured by themſelves, with as little danger as poſſible of the extrication or tranſpoſition of any of their principles. The dry matter being digeſted in a little pure diſtilled water, a ſaline ſubſtance is commonly extracted by the water, and an earthy one is left, no longer diſſoluble in aqueous menſtrua.

The earthy matter is commonly not one ſimple earth, but a combination of two or more: 1. *aluminous earth*, diſtinguiſhed by its diſſolving in the vitriolic acid into an auſtere liquor; 2. *magneſia*, diſſolving in the ſame acid into a bitter liquor; 3. *calcareous earth*, not diſſolving at all in the vitriolic acid, but readily in the nitrous and marine, from both which it is precipitated by the vitriolic; 4. *ſelenites*, not diſſoluble in any acid, till ſtrongly calcined in contact with burning fuel, by which proceſs it is reduced to calcareous earth; 5. ſome of the abſolutely *indiſſoluble* earths, whoſe particular ſpecies, in the ſmall quantities wherein they are obtained in theſe kinds of experiments, it is difficult and of little importance to determine. The two firſt are rarely met with in the reſidua of waters; the others are frequent, perhaps univerſal.

The ſaline ſubſtances are; the mineral fixt alkali, *natron*; the vitriolic acid, combined with this alkali into *ſal mirabile*, or with magneſia into *ſal catharticus*, or with the aluminous earth into *alum*; the nitrous acid, combined with the alkali into *nitre (a)*, or with ſome of the ſoluble earths into *nitrous ſalts*; the marine acid, combined with the alkali into *common ſalt*, or with ſoluble earths into *muriatic ſalts*; or a *volatile alkali* combined with the acids into *ammoniacal ſalts* (ſee the reſpective ſalts.) **(b)* The common, muriatic and nitrous ſalts are frequent; nitre, alum, ſal mirabile, and ammoniacal ſalts very rare.

Moſt of theſe ſalts may, by careful cryſtallization, be ſeparated in their proper form: they may likewiſe be diſtinguiſhed, however blended together, by additions. 1. The fixt alkali, unſaturated, is known, by

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(a) Leigh, *natural hiſt. of Lancaſhire, &c. p.* 39.

**(b)* Another medium by which mineral ſubſtances may be rendered ſoluble in water is *fixable air*, or *gas*. This matter is found to be contained in large quantity in many mineral waters, particularly ſuch as are diſtinguiſhed by a briſk ſharp taſte, and the property of ſparkling when poured out. From ſome experiments of the Hon. Mr. Cavendiſh *(Philoſ. Tranſ. Vol. LVII.)* it was found, that calcareous earth could be diſſolved in water impregnated with fixable air; and it appeared probable, that this combination actually takes place in the compoſition of Rathbone-place water. Mr. Lane, in *Vol. LIX.* of the *Philoſ. Tranſ.* has proved by experiment, that the ſame kind of gas will render iron ſoluble in pure water, without any other addition; whence it may be concluded with ſufficient probability, that a part at leaſt of the iron in the chalybeate waters of Spa and Pyrmont, which are known to abound with fixable air, is held in ſolution by means of this principle. This ſuppoſition well explains ſeveral of the phenomena of theſe waters; as particularly their ſpeedy decompoſition in the open air, when this very volatile principle is diſſipated. The above concluſions are confirmed by Dr. Brownrigg's experimental inquiry into the nature of the elaſtic ſpirit contained in the Pouhon water and other *acidulæ*. *Philoſ. Tranſ. Vol. LV.* and *LXIV.* In order to detect the preſence of this matter in waters, ſome of the water muſt be boiled in a cloſe veſſel, from which a tube is carried, having a bladder tied to its extremity. The air expelled by the heat will enter the bladder, and may then be examined by the proper teſts of fixable air. Vid. *Aer fixus*.

by its raiſing an effervefcence with ſpirit of ſalt. 2. The ſpecies of acid is diſtinguiſhed, by adding to the exſiccated maſs a little oil of vitriol: if the acid is the marine, it will be expelled in white, and if the nitrous, in red vapours; but if it is the vitriolic, no change will enſue. The marine acid may likewiſe be known, by the compound enabling pure aqua fortis to diſſolve gold leaf, or a mark made with gold on a touchſtone; the nitrous, by its deflagrating, when ignited, on the contact of any inflammable matter; the vitriolic, by its precipitating any ſolution of calcareous earth, as of chalk in aqua fortis, and the precipitate being a ſelenites, or not diſſoluble in freſh aqua fortis. 3. The baſis, or ſubſtance combined with the acid in the ſaline compound, is found, by adding to a ſolution of the matter, a little ſolution of ſalt of tartar, or any other fixt alkaline ſalt: if the baſis is a fixt alkali, no change will enſue; if an earth, it will precipitate; if a volatile alkali, a pungent ſmell will diſcover it.

THE pureſt of the common waters is that of ſnow, carefully collected on the tops of mountains, or on an open plain. A gallon, ſlowly evaporated or diſtilled, leaves only two or three grains of ſolid matter. Diſtilled water itſelf leaves nearly as much, upon a ſecond, and upon repeated diſtillations; but with this difference, that the reſiduum of ſnow water, like that of all the other natural ones, is browniſh and ſaline; whereas, that of the diſtilled is a fine white earth, void of ſaline matter, partly calcareous, and partly indiſſoluble. Snow water, kept in a warm place, in clean glaſs veſſels, not cloſely ſtopt but covered from duſt, *&c.* becomes in time putrid; though in well-ſtopt bottles it remains unaltered; I have ſeen ſome, which after keeping for many years was perfectly clear and taſteleſs. Diſtilled water ſuffers no alteration in either circumſtance. The ſaline matter of ſnow water is commonly of the nitrous kind, compoſed of the acid of nitre united with calcareous earth.

The next in purity is rain water, collected with the ſame precautions as the foregoing, after the rain has continued for ſome time, ſo as to clear the air from inſects or other light bodies that may float in it. Neither this water nor the preceding diſcover any heterogeneity on the common trials with acids, alkalies, ſoap, blue vegetable juices, or metallic ſolutions, till great part of the aqueous fluid has been ſeparated by evaporation. Evaporated to dryneſs, it leaves four or five grains of ſolid matter on the gallon. Its ſalt is often nitrous, and its earth in great part calcareous.

The water of limpid rivers ſtands next in purity; and proves, though not equally with the two preceding, yet ſufficiently ſoft, and fit for all the purpoſes of life. Rivers are for the moſt part purer and ſofter than the ſprings from which they are ſupplied; at a diſtance from, than near to the ſource; when their courſe is rapid, than when ſlow.

Of ſpring waters, there are ſome, which approach in purity to that of rain; but the greater number are of all waters the hardeſt and moſt impure. Some, even of thoſe which the eye and palate judge to be good waters, contain above an hundred grains of ſolid matter on the gallon. The ſaline part of theſe waters is moſt commonly nitrous (a) or muriatic, that is, compoſed of the nitrous or marine acids united with earths: on adding to them, by little and little, a ſolution of any alkaline ſalt, the liquor becomes turbid and milky, more and more, till the acid, completely neutralized by the alkali, parts with all the earth, which on ſtanding ſettles to the bottom. The water thus corrected, though really no purer than at firſt, is found perfectly ſoft for œconomical uſes, and much leſs, if at all, detrimental to health; its pungent, auſtere, earthy ſalt, being now converted into a mild neutral one.

River waters generally putrefy ſooner than thoſe of ſprings: during the putrefaction, they throw off a part of their heterogeneous matter, and at length become ſweet again and purer than at firſt. Hard waters are remarkably indiſpoſed to corrupt, and even preſerve putreſcible ſubſtances for a conſiderable length of time: hence, as Dr. Home obſerves, they ſeem to be beſt fitted for keeping at ſea, eſpecially as they are ſo eaſily ſoftened by a little alkaline ſalt.

The pureſt waters ſooneſt freeze; hence ice is purer than the water that remains unfrozen: on this principle, vinous and ſome ſaline liquors may be freed from a part of their ſuperfluous water by gentle congelation. Ice, expoſed to the open air, loſes of its weight, its ſuperficial parts being diſſolved or abraded by the motion of the atmoſphere. This property of ice was known to Hippocrates; who, imagining not the ice in its whole ſubſtance, but ſome of its finer and lighter parts to be diſſipated, was hence led unjuſtly to condemn both melted ice and ſnow as the moſt impure of all waters.

(a) Home, *experiments on bleaching*. Marggraf, *mem. de l'acad. des ſcienc. de Berlin, anno* 1751.

With regard to the medicinal powers of pure water, little more can be ſaid, than what is too obvious to require being mentioned. Simple fluidity; univerſal innocence, or the abſence of every quality that can offend the tendereſt organ; miſcibility with all the animal juices, in a ſtate of perfect health, except fat; unfitneſs to dilute or mingle with them when greatly thickened, as in ſome diſeaſes; a diſpoſition to paſs off by the cutaneous pores, more ſpeedily and more plentifully than by the kidneys, in conſequence perhaps of its total want of irritation; make the principal part of its medical character. To which may be added, that it is the moſt commodious medium for applying to the human body the powerful agents, heat and cold; of which the one expands and relaxes, the other contracts and conſtringes, all the fluid and ſoft parts of the animal machine.

AQUÆ MEDICINALES.

The medicinal or mineral waters participate more or leſs of the earthy and ſaline ſubſtances found in common waters; with generally ſome prevailing ingredient from which they have received their names.

1. Aquæ alkalinæ. Alkaline waters, as that of Tilbury.

The waters of this kind are impregnated chiefly with the mineral alkaline ſalt, and with calcareous earth; both which readily diſcover themſelves in the reſiduum left upon evaporation.

The Tilbury water, one of the ſtrongeſt perhaps of this claſs, has been found ſerviceable, not only in complaints ariſing from acidities in the firſt paſſages, but likewiſe in obſtinate alvine fluxes, ſome cutaneous defedations, female weakneſſes, and other diſorders from a laxity and debility of the fibres: it generally paſſes off freely by urine or perſpiration, and ſometimes, on firſt taking, purges a little. It may be drank to the quantity of a quart a day, or more; cold, or juſt warmed; by itſelf, or with the addition, if requiſite, of milk, with which it perfectly agrees. It does not bear evaporation, or a boiling heat; ſoon growing milky, and depoſiting a part of its earth and virtue. In cloſe veſſels, it keeps well: ſome that had been carried to the coaſt of Guinea and brought back again, appeared to me unaltered in all its properties.

2. AQUÆ CATHARTICÆ AMARÆ. Bitter purging waters.

THESE waters are diſtinguiſhed by their bitter taſte; and by their depoſiting, on the addition of alkaline ſalt, a copious white earth, great part of which is found to be magneſia. The dry matter, left upon evaporating them, conſiſts of the *ſal catharticus amarus*, intermixed with different earths, and often a ſmall proportion of other ſaline matters. The quantity of ſalt differs in different waters; ſome yielding ſcarcely two drams, and others an ounce or more on the gallon. One of the ſtrongeſt of the purging waters in this kingdom is that of Jeſſop's Well near Kingſton, of which a pint left on evaporation ſeventy-two grains; Kilburn and Cheltenham waters yielded ſixty-four grains; Acton, not fifty; and that of Epſom, leſs than forty.

Theſe waters are mild and gentle purgatives, operating with ſufficient efficacy, yet in general with eaſe and ſafety; rarely occaſioning any gripes, nauſea, or lowneſs. They may likewiſe be ſo managed, as to promote the animal ſecretions in general, and prove excellent aperients and attenuants in ſundry chronical diſorders.

The doſe of theſe waters, as a purgative, is from one to three pints, according to their ſtrength, to be drank by a little at a time. Their virtue may be increaſed, by diſſolving in the water ſome of the purified ſalt, or other purgative ſaline ſubſtances, as the artificial ſalt of Glauber, ſoluble tartar, Rochelle ſalt, or manna: additions of this kind are more eligible than boiling down the water, as its ſtrength is augmented in a more certain ratio, and its natural conſtitution preſerved entire. To render the liquor more acceptable to the palate and ſtomach, ſome gratefull diſtilled water, or aromatic tincture, as the *tinctura cardamomi*, may be added: it has been cuſtomary to infuſe or boil in the water ſome aromatic ſeeds, as thoſe of caraway: but very little of the virtue of the ſeeds is by this treatment communicated to the water. Their taſte is excellently covered by honey. As alterants, the water may be uſed for common drink; diluted with ſimple water, milk, whey, wine, or other liquids, ſo as but juſt to keep the belly open.

Theſe waters are found to purge more in their natural ſtate, than after they have been boiled, and than the ſalt obtainable from an equal quantity of them.—They contain, beſides the purging ſalt, no ſmall proportion of calcareous earth. Now, if a ſolution of calcareous earth, made either in pure water or in acids, be mixed with a ſolution of the purging ſalt, and the liquor evaporated; great part of the ſalt will be deſtroyed, its acid being transferred from its own earth into the calcareous earth, and forming, with this, a concrete neither purgative nor diſſoluble, namely ſelenites. As ſuch a concrete is found in the dry reſidua of the purging waters, we may preſume, that it owes its origin, as in this experiment, to the deſtruction of a part of the purgative ingredient; and that the water holds naturally a greater quantity of ſalt, than can be extracted from it by art.

3. AQUA MARINA. Sea water.

SEA WATER contains, beſides the common alimentary ſalt, a portion of bitter purging ſalt, ſimilar to that of the foregoing waters, and which remains diſſolved after the common ſalt has cryſtallized. After the purging ſalt alſo has been ſeparated, there remains a ſmall portion of a pungent ſaline liquor, which refuſes to cryſtallize, and which appears to be a ſolution of calcareous earth in the marine acid. The quantity of ſalt in different ſeas varies, according to the greater or leſs evaporation, and acceſſion of freſh water, from about one fiftieth to near one twentieth of the weight of the water.

Sea water has lately come into eſteem, againſt ſtrumous ſwellings and obſtructions of the glands, and different cutaneous foulneſſes. Dr. Ruſſel obſerves, that in the inflammatory ſtate of glandular ſwellings it is improper; that where the tumor tends to ſuppuration, it does no good till the pus is diſcharged; that in other circumſtances it is a remedy of great ſervice, whether for reſolving the tumor, or preventing a freſh fluxion upon the part; and that it is uſeful in diſorders of the internal glandulous parts, as thoſe of the meſentery, the liver, *&c.* as well as in thoſe of the external. It has been given alſo in the true marine ſcurvy, and found to promote the cure; though incapable of conquering the diſeaſe without aſſiſtances from the vegetable kingdom.

The doſe of ſea water is from half a pint to a pint, which may be repeated every morning for ſome months. In theſe doſes, it gently purges the belly, promotes alſo the other excretions, and ſomewhat warms and ſtrengthens the habit: in large ones, it excites vomiting. In many caſes, bathing in the water is advantageouſly joined; both as a general corroborant, and as a topical diſcutient and antiſeptic.

This water, at firſt taking, is apt to occaſion great drought; an inconvenience which is ſeldom much complained of after its uſe has been continued for ſome time, and which may in good meaſure be palliated by ſleeping immediately after it is drank. It is apt likewiſe, in ſome conſtitutions, to produce immoderate heat; and even when uſed only externally, an uneaſineſs and itching of the ſkin: it is therefore to be refrained from in all inflammatory caſes, and in habits prone to phlogoſes. Among all the common ſaline bodies, to heat and to dry ſeem to be qualities peculiar to the marine ſalt.

4. AQUÆ CHALYBEATÆ. Chalybeate or ſteel waters; as thoſe of Spa, Pyrmont, Tunbridge, Iſlington, *&c.*

THESE waters diſcover their being impregnated with iron, by ſtriking a blue colour with a ſolution of fixt alkaline ſalts that have been calcined with animal coals, or with a tincture made by digeſting the pigment called Pruſſian blue in volatile alkaline ſpirits: this laſt preparation is preferable to the other, as it may be ſaturated more completely with that matter which tinges diſſolved iron blue.

Iron in waters is diſcovered alſo by the purpliſh, bluiſh, or blackiſh colour, which they aſſume on the addition of certain vegetable aſtringents, among which powdered galls are the moſt eligible. This laſt method of trial, which is that commonly made uſe of, diſtinguiſhes as minute proportions of iron as the firſt, provided the liquor contains no more acid than is ſufficient to keep the metal diſſolved; but if the quantity of acid is very large, aſtringents give no notice of the iron, whereas the tincture of Pruſſian blue diſcovers it univerſally.

Chalybeate waters appear to differ from one another, not only in the degree, but in the ſpecies, of their impregnation.

Some reſemble a ſolution of vitriol of iron made in common ſpring water. Like that ſolution, they ſtrike a blue or black colour with galls, depoſite on ſtanding ſome of their iron in an ochery form, but retain great part of it for a length of time, and yield on evaporation a ſaline matter, which communicates a ferrugineous impregnation to freſh water, and which appears to be a true vitriol of iron. From ſome waters, as that of Hartfell in Scotland, the vitriol has been cryſtallized (a) in its proper form.

(a) *Edinb. eſſ. and obſ. phyſ. & lit.* i. 346.

Others reſemble a ſolution of the ſame vitriol with an admixture of natron or the mineral fixt alkaline ſalt. Like ſuch a mixture*(a)*, they ſtrike, when freſh, a purple colour with galls, depoſite the whole of their iron in a very little time, and yield on evaporation, not a vitriol or chalybeate ſalt, but a ſalt compoſed of the acid of vitriol and alkali: ſome, as that of Geronſterre at Spa, yield alſo a little pure alkali*(b)*, beſides what is ſatiated with acid. It may be obſerved, that in artificial mixtures of alkalies with ſolutions of vitriol, or other metallic ſolutions made in acids, (and poſſibly ſomething of the ſame kind may obtain alſo in the natural,) if the veſſel is immediately ſtopt, ſo as to have no vacuity after the inſtant of mixture; the acid and the alkali have no action on one another ſo long as they are kept confined, that is, ſo long as the extrication of air, the common concomitant of their mutual action, is prevented: but as ſoon as the veſſel is opened, or the contained air has an opportunity of eſcaping, the alkali begins to abſorb the acid, a ſparkling or effervеſcence enſues, greater or leſs in proportion to the quantities of the two, and the metal, thus diveſted of its acid ſolvent, precipitates*(c)*.

It is not however to be preſumed, that the ſpeedy ſeparation of the ferrugineous matter of waters is owing univerſally to an alkaline precipitant. Solutions of pure vitriol in pure water depoſite a part of their iron ſpontaneouſly; and if the ſolutions be ſo far diluted, as to ſtrike with aſtringents a colour little more than perceptible, they will loſe ſo much in a few hours as to exhibit with the ſame aſtringents no tinge at all.

In general, a blue or black colour produced with galls may be looked upon as a mark of the abſence of alkaline ſalt; and a purple, as a mark that either the water originally contained an alkali, or has become alkaleſcent or verging to putrefaction by ſtanding. On the ſame principle, a degree of alkaleſcence, or of tendency to corruption, in common waters, very far too minute to be ſenſible on any other known trial, may be made conſpicuous; *viz.* by the water, when impregnated with a little vitriol, as a grain or two to a pint, ſtriking a purple colour with galls.

(a) That an alkaline addition is neceſſary, to make ſolutions of vitriol ſtrike with galls the purple colour that chalybeate waters do, is a diſcovery of Mr. Reynolds, *exper. on a chalybeate water near Bromley in Kent.*

(b) Rutty, *ſynopſ.* 323.

(c) A diſcovery of Mr. Scheffer, *Suenſka vetenſk. acad. handl.* 1753.

The ſpontaneous ſeparation of the iron, which happens in many of the chalybeate waters, and which, though it may be retarded, cannot be prevented by any care in ſtopping the bottles, after the waters have been once expoſed to the air, renders them unfit for long keeping or carriage. A ſmall addition of any acid prevents the ſeparation, even in thoſe whoſe virtues are naturally the moſt fugitive: it is ſuſpected, that the chalybeates brought from Germany have commonly this artificial impregnation.

Theſe waters are uſed, like other chalybeates, in debilities and laxities of the ſtomach, chylopoietic organs, and of the viſcera in general; in decays of conſtitution; in cachectic, chlorotic, and other like indiſpoſitions. Where they paſs freely, they are accounted more invigorating than the artificial preparations of iron, and leſs liable to diſorder particular conſtitutions: many of them however are more apt to fail of taking due effect, on account perhaps of the acid ſolvent being more diſpoſed to quit the metal. Some of them are rarely obſerved, and ſome ſcarcely ever, to give any black tinge to the feces, though drank in large quantity; a phenomenon which may perhaps be aſcribed to their depoſiting their iron in the firſt paſſages in an indiſſoluble and inactive ſtate, rather than to the cauſe which ſome have aſſigned, their carrying it entire into the blood. They are taken to the quantity of two or three pints or more in a day, divided into different doſes; and require the ſame caution in their uſe as the artificial chalybeates.

5. AQUÆ CUPREÆ. Cupreous waters; as thoſe of Neuſol in Hungary, and Wicklow in Ireland.

THESE waters, which are little other than a ſolution of vitriol of copper, and thoſe which contain a much ſmaller proportion of that metal blended with vitriol of iron and other ingredients, betray their cupreous impregnation, by ſtaining a poliſhed iron, immerſed in them, of a copper colour, and by ſtriking a blue with volatile alkaline ſpirits. Some of them have been uſed, like other venereal ſolutions, as external detergents. Some, more ſlightly impregnated with the copper, have been taken internally as emetics, purgatives, and deobſtruents; a practice which appears much too hazardous to be followed.

All the mineral waters we know of, are impregnated with more or fewer of the foregoing ingredients, combined in various proportions. The hot waters called *thermæ* or baths, have not, as ſuch, any peculiar impregnation; their heat depending, not upon an intrinſic, but an external cauſe: the hot ſprings of Tœplitz in Germany appear, from Hoffman's experiments upon them, to be no other than ſimple water. Of the waters called ſulphureous, or thoſe which have a fetid ſmell reſembling that of ſulphureous ſolutions, there are ſeveral which do not ſeem to contain any actual ſulphur: nor is there any actual ſulphur in the extremely fetid and diffuſive vapour, which ariſes from ſolutions of ſulphur itſelf during their precipitation with acids. Analogous to this, perhaps, is the ſulphureous impregnation of certain waters. The nature and medicinal effects of this ſubtile volatile principle are little known; the ſulphureous waters containing, at the ſame time, other active ingredients. There are likewiſe waters which appear to be impregnated with ſulphur in its whole ſubſtance, and which may therefore be preſumed to participate of the virtues of the artificial ſolutions of that concrete.—For the analyſes and uſes of particular waters, the reader may conſult Dr. Rutty's ſynopſis.

AQUILEGIA.

AQUILEGIA Pharm. Pariſ. Aquileia. Aquilina. Aquilegia flore ſimplici J. B. Aquilegia vulgaris Linn. Columbine: a plant with ſlender reddiſh ſtalks, and bluiſh green leaves, in ſhape ſomewhat roundiſh, with ſeveral ſlight indentations, and one or two deep ones. The flower, commonly blue, ſometimes red or white, conſiſts of five irregular petala, each of which is ſuppoſed to reſemble a flying eagle or pigeon *(aquila* or *columba)* whence the names of the plant: the flower is followed by five pods, full of ſhining black oval ſeeds. It is perennial, grows wild in woods, and flowers in June.

The ſeeds of columbine have been commended, in ſubſtance and in emulſion, as an anthelmintic, as an aperient in the jaundice, and for promoting the eruption of the meaſles and ſmall pox. Their ſenſible qualities afford little foundation for theſe kinds of virtues, as they do not ſeem to differ materially from thoſe of the cold ſeeds ſo called; the columbine ſeeds being only ſomewhat more mucilaginous, and accompanied with ſomewhat of a diſagreeable reliſh.

The virtues aſcribed to a tincture of the flowers, as an antiphlogiſtic, and for ſtrengthening the gums and deterging ſcorbutic ulcerations in the mouth, appear to be better founded; the tincture being made with an addition of the vitriolic acid, and differing little from our officinal tincture of roſes. The flowers themſelves, and the conſerve and diſtilled water of them directed in ſome foreign pharmacopœias, are inſignificant.

ARANEARUM TELÆ.

ARANEARUM TELÆ Pharm. Edinb. (*a*) Cobwebs. Theſe are applied by the common people for ſtopping the bleeding of wounds; which they effect, not by any ſtyptic power, but by adhering to the part, and cloſing the orifices of the veſſels.

ARGENTINA.

ARGENTINA, Potentilla, Anſerina, Pharm. Edinb. (*b*) *Pentaphylloides argenteum alatum ſeu potentilla Tourn. Potentilla anſerina Linn.* Silverweed or wild tansy: a low creeping plant, with winged leaves, compoſed of ſeven or eight pair of oblong indented ſegments ſet along a middle rib, with ſmaller portions between, green above, and covered with a ſilver-coloured down underneath; the flowers, which riſe on long pedicles in the boſoms of the leaves, are compoſed, each, of five gold-coloured petals with a number of threads in the middle, and followed by a ſmall cluſter of naked ſeeds. It is perennial; common by the ſides of rivulets and in moiſt uncultivated places; and flowers in June.

The leaves of *argentina* have been generally looked upon as ſtrong aſtringents, and recommended as ſuch in fluxes and hæmorrhages. That they have an aſtringent quality is manifeſt to the taſte, and from their ſtriking a black colour with ſolutions of chalybeate vitriol: but in the leaves in ſubſtance, whether freſh or dry, and in their infuſions, decoctions, and expreſſed juice, the preparations which have been generally made uſe of, the aſtringency is very weak; and even the extracts made

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(*a*) Expunged.

(*b*) Expunged.

from them, by water and by rectified ſpirit, in which all their active matter is concentrated, are only among the milder ſtyptics or corroborants. The ſpirituous extract is ſtronger than the watery, and in proportionably ſmaller quantity.

ARGENTUM.

ARGENTUM Pharm. Lond. & Edinb. SILVER: a white metal; becoming yellow, and at length black, from the vapour of ſulphureous ſolutions and of putrefying matters; extremely malleable; near eleven times ſpecifically heavier than water; fuſible in a bright red heat; fixt and indeſtructible in the fire; ſoluble, in the nitrous acid, into a limpid liquor, which ſtains the ſolid parts of animals black; not ſoluble, by moderate digeſtion, in the marine or vitriolic acid; precipitable by theſe acids from its ſolution in the nitrous.

The greateſt quantities of this metal are found in the mines of Chili and Peru; commonly in ſmall grains and filaments, embedded in different earths and ſtones; from which it is ſeparated by pulverization, ablution with water, and amalgamation with mercury. Several mines in England, Germany, and other parts of Europe, afford ſilver; rarely native, or in diſtinguiſhable maſſes; commonly reduced to a ſtate of ore, of a red, or of a yellow or brown, or of a duſky leaden or black colour, by an intimate admixture of arſenic, or ſulphur, or both; from which it cannot be extracted by quick ſilver, but which are diſſipated by calcination, ſo as to leave the ſilver ſeparable from the remaining earth by fuſion.

CRUDE ſilver, however comminuted or attenuated, has not been obſerved to produce any medical effect; though abundance of virtues were aſcribed to it by the credulity of former times. It is not ſoluble in any of the fluids of the animal or vegetable kingdom.

Cauſticum lunare *Ph. Lond.&Edin.*

It diſſolves, by the aſſiſtance of a moderate heat, in about twice its weight of pure aqua fortis: the ſolution, duly exhaled and ſet in the cold, cryſtallizes into thin colourleſs tranſparent plates. The cryſtals, or the dry matter left upon inſpiſſating the ſolution, melt in a moderate fire, and on cooling form a dark coloured cauſtic maſs. This preparation is in common uſe for conſuming warts and calloſities; but is leſs fit for ſuch purpoſes as require a conſiderable quantity to be applied, as the laying open of impoſthumations, being apt to liquefy by the moiſture of the ſkin, and ſpread beyond the limits in which it is intended to operate. For the greater conveniency of uſing, it is caſt into oblong ſlender pieces, either in iron pipes heated and greaſed, or in holes made by ſome ſmooth inſtrument in a lump of tempered tobacco-pipe clay: each piece is wiped clean, and wrapt in dry ſoft paper. The matter is to be poured out as ſoon as it flows thin: if kept a little too long in fuſion, it becomes too thick to run into the mould, and parts with ſo much of its acid as not to be ſufficiently corroſive: by a longer continuance of the fire, all the acid is gradually diſſipated, and a lump of pure ſilver remains.

A preparation ſomewhat leſs cauſtic than the foregoing, is recommended internally by Angelus Sala, Boyle, and others, as an anthelmintic, and as a purgative in hydropic and inveterate ulcerous diſeaſes. For this purpoſe, the cryſtals of ſilver are diſſolved in water, and mingled with a ſolution of equal their weight of nitre: this mixture is evaporated to dryneſs, and the reſiduum calcined with a gentle heat, juſt not ſufficient to melt it, and kept continually ſtirring, till no more fumes ariſe. Boerhaave aſſures us, that two grains of this preparation, made into pills with crumb of bread and a little ſugar, and taken on an empty ſtomach, ſome warm water ſweetened with a little honey being drank immediately after, purge gently without griping, and bring away a large quantity of water almoſt without the patient's perceiving it. He nevertheleſs cautions againſt the too liberal or continued uſe of this medicine, and obſerves, that by its corroſive quality it weakens the bowels, particularly the ſtomach, and that therefore proper corroborants, as rob of juniper berries, ought to be interpoſed. Even with this aſſiſtance, however, it is at beſt a dangerous medicine, and as ſuch deſervedly ſtands excluded from practice.

Pilula lunaris.

ARGENTUM VIVUM.

ARGENTUM VIVUM Pharm. Lond. Hydrargyrus, Argentum vivum, Mercurius, Pharm. Edinb. MERCURY OR QUICKSILVER: an opake ſilver-coloured metallic fluid, appearing to the eye like melted lead or tin; about fourteen times heavier than an equal bulk of water;

not congealable by the greateſt known degree of natural cold(a); totally exhaling, by a heat below ignition, in ſubtile fumes, which condenſe into running mercury again.

Quickſilver is ſometimes found in the earth in its fluid form, and is then called *virgin* mercury; but for the moſt part it is intimately blended with ſulphur or earthy matters into a ſtate of ore. The ſulphureous ores are of a more or leſs beautiful red colour; the earthy or ſtony ones, grey, yellowiſh, brown, leaden coloured, *&c.* From theſe laſt, the metallic fluid is extracted by ſimple diſtillation: the ſulphureous require an addition of quicklime, iron filings, or ſome other ſubſtance that may abſorb and keep down the ſulphur, which otherwiſe would riſe in conjunction with the mercury. The principal mines of quickſilver, of which we have any account, are in Spain, Hungary, and the province of Friuli in the Venetian territories: conſiderable quantities are brought alſo from the Eaſt Indies.

This fluid, ſuppoſed by the Greeks to be poiſonous and corroſive, was introduced into medicine by the Arabians, as an ingredient in external applications, againſt different cutaneous maladies. This practice was followed by ſome phyſicians in Europe towards the end of the thirteenth century, but was not eſtabliſhed, or looked upon in general to be ſafe, till about the beginning of the ſixteenth, when the venereal diſtemper, then lately received from America, was found to yield to mercurial applications alone; and now alſo the internal uſe of mercury began to be ventured on, in this and in other diſeaſes.

PURE mercury has no perceptible acrimony, or taſte, or ſmell: there are examples of its having been lodged, for years, in cavities both of the bones and of the fleſhy parts, without having injured or affected them(b). Taken into the ſtomach in the quantity of an ounce or two, it ſoon paſſes through the inteſtinal tube, unchanged, and unfelt: hence ſome have been induced to give a pound or more in violent conſtipations, hoping that this innocent fluid, by its great weight and ſlipperineſs, would force open obſtructions, that had reſiſted the common methods of cure by purgatives, relaxants, and emollients. This practice, ſo far as I can learn, has not been attended with any remarkable ſucceſs; nor do the principles, on which mercury has been given in theſe caſes, appear to be juſt. The ſlipperineſs of this fluid conſiſts only in the mobility of its own parts, not in any power by which it can lubricate the veſſels of an animal. Its weight can be of no uſe, unleſs where the obſtruction lies in ſome deſcending part of the tube: and even ſuppoſing it to act perpendicularly, to the greateſt advantage, there is room to fear, that the preſſure of a pound or two will rather diſtend the ſuperiour part of the inteſtine, than be able to force a paſſage through the obſtinate obſtructions againſt which it is recommended.

(a) It is ſaid, that in ſome late experiments made at Peterſburg, with very intenſe degrees of artificial cold, (produced by mixing ſnow and ſpirit of nitre ſeparately brought to great coldneſs,) pure mercury congealed into a ſilver-like malleable metal, which quickly melted again on an abatement of the cold; and that in Fahrenheit's thermometer, it ſunk, before its congelation, to between three and four hundred diviſions below 0; that is, about as far below the point at which water freezes, as the heat, in which tin melts, is above it.

(b) Mead, *Mechanical account of poiſons, eſſay* iv.

When mercury is reſolved into fume, or altered in its form by fire, or combined with a ſmall portion of mineral acids, or otherwiſe divided into minute particles and prevented from reuniting by the interpoſition of proper ſubſtances; it operates with great power, and extends its action through the whole habit. In theſe forms, whether taken internally, or introduced into the blood from external application, it ſeems to liquefy all the juices of the body, and may be ſo managed as to promote excretion through all the emunctories. If its power is not reſtrained, or determined by additions, it tends chiefly to affect the mouth; and having fuſed the humours in the remoter veſſels, occaſions a plentiful evacuation of them from the ſalival glands, with conſiderable ſwellings, inflammations, and ulcerations of the parts. The ſalivation is accompanied with a diminution of moſt of the other diſcharges, and an increaſe of theſe diminiſhes the ſalival flux.

The ſalutary effects of mercurials have, in many caſes, very little dependence on the quantity of ſenſible evacuation. Venereal maladies, and chronical diſtempers proceeding from a viſcidity of the humours and obſtruction of the ſmall veſſels, are often ſucceſsfully cured by mercurials taken in ſuch doſes as not to produce any remarkable diſcharge; eſpecially if aſſiſted by diaphoretics and a warm diluent regimen. In this view, camphor, and the reſin or extract of guaiacum, are frequently joined to the mercury; and to the more active preparations, a little opium; which not only promotes the diaphoreſis, but prevents the mercury from irritating the firſt paſſages and running off by the groſſer emunctories.

This appears to be, in general, the moſt advantageous method of uſing mercurials; excepting, perhaps, only in venereal maladies of long ſtanding, or ſuch as have ariſen to a great height, or have affected the bones; which demand, for the moſt part, a full ptyaliſm. In theſe caſes, the diſeaſe has been ſubdued for a time by the alterative method, but afterwards broken out afreſh, and been completely cured by ſalivation: and, on the other hand, ſome cutaneous foulneſſes, after reſiſting ſalivation, have yielded to an alterative courſe.

Though mercurials are found to be ſalutary in ſundry cutaneous defedations, and impurities of the blood and juices vulgarly called ſcorbutic; they are always pernicious in the true ſcurvy, and dangerous in conſtitutions inclining to this diſeaſe, where the humours are acrimonious, and colliquated, and diſpoſed to a putreſcent ſtate. In ſuch circumſtances, mercurial medicines are apt to operate with violence: ſmall doſes have occaſioned high and laſting ſalivations. The removal of theſe accidents is to be attempted by glyſters, purgatives, diaphoretics, or ſuch other means, conſiſtent with the patient's ſtrength and the particular ſymptoms, as may procure a ſpeedy revulſion from the ſalival ducts.

A long continued uſe of mercury is in no caſe free from danger, as it manifeſtly colliquates the whole maſs of blood, and tends to weaken the nerves, ſo as to bring on tremors and paralyſes. The miners, and thoſe who are expoſed to the fumes of mercury in extracting it from the ore, are ſaid to be almoſt always, ſooner or later, ſeized with theſe kinds of complaints; to become generally in a few years paralytic, and at laſt to die hectic.

Mercurials are deſtructive to inſects, perhaps of every kind. They are ſometimes given internally againſt worms; and ſometimes applied externally, in unguents, for deſtroying cutaneous animalcula. The itch, now reckoned an animalcular diſeaſe, is ſometimes cured by mercurial unguents; which, nevertheleſs, cannot be depended on for this effect, unleſs in ſlight caſes; as their antipſoric efficacy ſeems to reach no farther than thoſe parts of the ſkin to which they are applied, and as they cannot with ſafety be applied freely, to any great extent of the body, particularly of the trunk.

Mercury has been of late recommended as an effectual antidote againſt the poiſon of the mad dog. Several caſes are related, by Dr. James, Default, and Du Choiſel, both of brutes and human ſubjects, bitten by mad dogs, being preſerved from the uſual conſequences of this bite, by mercurial unctions, and mercurials taken internally. There are ſome inſtances given alſo of a cure being obtained, by the ſame means, after ſymptoms of madneſs had appeared (a).

THIS fluid diſſolves, by the aſſiſtance of trituration or heat, moſt metallic bodies; retaining its own natural colour, but having its conſiſtence increaſed in proportion to the quantity of the metal: iron is the only one of the common metals, to which it will not eaſily adhere (b). Biſmuth unites with it more intimately (c) than any other metallic body, and remarkably promotes the union of lead with it: mercury, impregnated with a little biſmuth, was found to diſſolve conſiderable maſſes of lead, in a heat no greater than that of the human body. Caſes ſometimes happen, in which the ſurgeon may probably avail himſelf of this property.

From moſt of the fluid *amalgams*, or mixtures of mercury with metals, great part of the quickſilver may be ſeparated by preſſure through leather; but biſmuth, and mixtures of biſmuth with lead, are ſo intimately diſſolved, as to paſs, in conſiderable quantity, through the leather with it; and hence, with theſe metals, it has been frequently adulterated. This abuſe may be diſcovered, by the mercury contracting a dull coloured ſkin upon the ſurface, or ſtaining paper blackiſh; by its not running freely into round globules, but forming tears or vermicular ſtriæ; by its leaving, upon evaporating a little of it, a powdery matter or a coloured ſpot on the bottom of the veſſel; and by its producing a turbid milkineſs during its diſſolution in aqua fortis.

Quickſilver is commonly purified from theſe and other like admixtures, by diſtilling it in a glaſs or rather iron retort, or in an iron pot, with a head made of one piece, the veſſel commonly uſed for this purpoſe by the refiners, and afterwards waſhing it with vinegar, or with common ſalt and water. The chemiſts, ſuſpecting that ſome metallic bodies(a) may be carried up by the mercury in diſtillation, recommend certain additions, particularly ſulphur; which, from its rendering the mercury itſelf leſs diſpoſed to ariſe, may be preſumed to have this effect in a greater degree on the metals that are naturally not volatile: they ſublime the mercury and ſulphur together into cinnabar, which ſee in the ſequel of this article, and adding to this compound ſome iron filings to abſorb the ſulphur, diſtil off the mercury ſuppoſed now to be completely pure. Mr. Malouin recommends uniting the quickſilver with crude antimony inſtead of ſulphur, by leiſurely pouring the mercury heated into an equal quantity of antimony made fluid by fire, and then ſeparating the mercury, as from cinnabar, by diſtillation with iron: the antimony, he ſays, by virtue of its reguline parts, detains the other metallic bodies more effectually than ſulphur can do, and the mercury is thus brought to a ſtate of purity even greater than that of the animated mercuries of the alchemiſts; for the proceſſes, by which they imagined it to be animated or exalted in its powers, appear to have done no more than to purify it to a certain degree. He has not, however, communicated the particular facts on which this aſſertion is built; or given any experimental proofs of the greater purity of mercury diſtilled from antimony, than of ſuch as has been revived from factitious cinnabar, or even of ſuch as has been carefully diſtilled without addition.

(a) James, *treatiſe on canine madneſs*.

(b) The other metallic bodies, with which it cannot be united by the uſual methods, are *regulus of arſenic*, and two lately diſcovered metals called *nickel* and *regulus of cobalt*. See Neumann's chemical works, *p.* 152, *&c.*

(c) Though part of the biſmuth ſeparates ſpontaneouſly from the mercury, it does not follow, as ſome have concluded, that the union is imperfect or ſuperficial, but that the mercury can retain only a *certain quantity* of biſmuth; and a certain quantity I have found it to retain after long continued agitation.

Argent. viv. purif. *Phar. Lond.*

QUICKSILVER, triturated with powdery or with thick unctuous matters, is gradually divided, and incorporated with them into one uniform compound, in which no particle of the mercury can be diſtinguiſhed by the eye. It is moſt difficultly mixed with earthy powders, moſt eaſily with thick balſams and mucilages.

Killed or extinguiſhed, that is, ground till the mercurial globules diſappear, with one twelfth its weight or more of Venice turpentine, or half that quantity of balſam of ſulphur, it is mingled with plaſters; which, for this purpoſe, are to be melted, and taken from the fire, before the mercury is ſtirred in. The college of London directs the mercury, killed with balſam of ſulphur, to be mixed with four times its quantity of the common plaſter†, or of gum ammoniacum‡: that of Edinburgh uſes a pound and a half of common plaſter, and two ounces and a half of Venice turpentine, to eight ounces of the quickſilver ‖. Theſe compoſitions are applied as reſolvents and diſcutients, againſt venereal pains, and indurations of the glands; the mercury exerting itſelf in ſome degree upon the part, though it is rarely introduced into the blood in ſuch quantity as to affect the mouth. Aſtruc obſerves, that even by covering all the limbs with mercurial plaſters, the method once practiſed for raiſing ſalivations, it was difficult to obtain a complete and effectual ptyaliſm (a).

(a) Boyle, *Of volatility and fixedneſs*, *Abr.* i. 377.

† Emplaſtr. commune cum mercurio *Ph. Lond.*
‡ Emp. ex ammon. c. merc. *Phar. Lond.*
‖ Emplaſtr. mercuriale *Ph. Edinb.*

Subſtances of leſs conſiſtence, as ointments, leave the mercury at more liberty to act; and are generally and deſervedly preferred to the plaſters, in the intention of topical reſolvents, *&c.* as well as in that of conveying the mercury into the habit. A dram of quickſilver mixed with unguents, well rubbed into the ſkin, and repeated every day, or rather every other day, generally produces, ſoon after the third application, and ſometimes after the ſecond, appearances of inflammation in the mouth, which are followed by a free and copious ptyaliſm: thoſe employed in rubbing the ointments on others, have been ſalivated by the mercury imbibed through the palms. The ptyaliſm raiſed by unction is often more effectual, and accompanied with fewer inconveniencies, than that produced by mercurials taken internally; which laſt are apt, in ſome conſtitutions, to run off by the inteſtines, without affecting the ſalival glands; and in others, to affect the mouth ſo haſtily, as to excite a copious ſalivation without extending their action ſufficiently to the remoter parts. The mercurial ointments are commonly prepared, by rubbing the mercury with lard or other fat matters of a due conſiſtence: three parts of hog's lard, and one of mutton ſuet, make a commodious baſis, with which may be mixed one part or more of mercury†. As a good deal of labour is required for thus uniting the quickſilver with ſimple fats, ſome are accuſtomed to previouſly extinguiſh it with a little turpentine‡ or balſam of ſulphur‖, after which it is mixed, more eaſily, with twice‖ or four times‡ its weight of lard; theſe additions, however, particularly the turpentines, are, in this form, accompanied with an inconvenience; being apt, by frequent rubbing, to fret the ſkin.

† Ung. mercuriale *Ph. Edinb.*
‡ Ung. cærul. mitius *Ph. Lond.*
‖ Ung. cærul. fortius *Ph. Lond.*

(a) *De morbis venereis, tom.* i. *lib.* ii. *cap.* 7.

Mercury is divided alſo, with different materials, for internal uſe, and given, as an alterative and as an anthelmintic, from two or three grains to eight or more. Half a dram of quickſilver is ground, for example, with two ſcruples and a half of prepared crabs-eyes. Sometimes alſo purgative materials are joined: in this intention, the above quantity of mercury is commonly killed with twelve grains of Straſburg turpentine, and then beaten up with eight grains of the cathartic extract, and ſix of powdered rhubarb: the pills called Belloſte's, are ſuppoſed to be a compoſition of this kind. The Edinburgh college, in their laſt diſpenſatory, have rejected all theſe compound forms, and direct only a maſs of pills made of quickſilver divided by equal its weight of honey, and afterwards beat up with double the weight of bread-crum and a ſufficient quantity of water.

Merc. alkalazat. *vulgo.*

Pil. mercurial. *Pharm. Lond.*

Pil. mercurial. *Pharm. Edinb.*

A treatiſe has been publiſhed by Mr. Plenck of Vienna, recommending a mixture of quickſilver and gum-arabic as preferable to all the other mercurial preparations hitherto known; being in all caſes ſafe, rarely or never producing a ſalivation, and acting ſoon on the venereal virus. He directs one dram of purified quickſilver, and two drams of the gum, to be ground together in a ſtone mortar, adding by degrees half a ſpoonful of water, till the quickſilver diſappears, and the whole becomes a viſcid grey mucilage, which happens in a ſhort time: half an ounce of ſyrup, and eight ounces of a ſimple water, are then gradually added, and two ſpoonfuls of the mixture given every morning and evening. Part of the mercury remains ſuſpended in the liquor, part ſettles to the bottom, but retains ſo much of the gum as to continue divided and form a grey mucous ſediment, which readily unites again with the water on ſhaking the veſſel: if the fluid be ſeparated, and the ſediment dried by heat, the mucilage then loſes its power, and the mercury runs into globules.

The author made trial of ſeveral other ſubſtances, both animal and vegetable, for the extinction of mercury, but found none that anſwered equally with gum-arabic. The mucus expectorated from the throat extinguiſhed it, and kept it divided after the addition of water; but very little of the mercury remained ſuſpended in the liquor, both the mercury and the mucus ſubſiding. Saliva had much leſs effect: yolks of eggs, white of eggs, bile, glue of iſinglaſs, gum-tragacanth, mucilage of quince feeds, clarified honey, ſimple ſyrup, either did not extinguiſh the mercury at all, or ſuffered it, on dilution with water, to run together again. But thick honey, unclarified, kept it divided; and ſyrups greatly promoted the effect of gum-arabic.

The trials of the gummy mercurial that have come to my knowledge, afford little foundation to expect from it any advantages above the common mercurial preparations. I have known it given, without much benefit, in caſes which were afterwards cured in a ſhort time by ſolution of ſublimate. I have been informed, that in ſome of our hoſpitals even ſmaller doſes than thoſe directed by the author have on the third day brought on a ptyaliſm. Dr. Baldinger, in his remarks on the laſt Edinburgh pharmacopœia, recommends this ſolution as an efficacious anthelmintic, eſpecially againſt the *lumbrici*.

Mercury, thus ſimply divided by theſe or other like matters, ſeems to operate more mildly, not only in the firſt paſſages, but after it has been received into the blood, than when combined with mineral acids, or reduced by fire into the form of a calx. At the ſame time, however, it is more uncertain, or more liable to fail of taking full effect; on account, perhaps, of the ſubſtances, by which its particles are diſunited, being ſoon ſubdued and ſeparated by the digeſtive powers, ſo as to leave part of the mercury to run together again and paſs off inactive through the inteſtines. How eaſily the union is diſſoluble, may be judged from hence, that when mercury is perfectly mixed with turpentine, if the mixture be beaten up with extracts and powders into a maſs for pills, a conſiderable part of the quickſilver, by this mechanic agitation, is often ſeparated and ſqueezed out in globules.

Æthiops mineralis *Ph. Lond. & Edinb.*

MERCURY, triturated with equal its weight of ſulphur, forms therewith a greyiſh black powder, which grows darker coloured in keeping, or on continuing the triture, and is commonly diſtinguiſhed by the name of *æthiops*. This compound is one of the mildeſt of the mercurial preparations; the mercury being far leſs active in mixture with ſulphur, than with any other known ſpecies of matter.

The union of the quickſilver with the ſulphur, effected by triture, at leaſt by ſuch a degree of triture as the ſhops are accuſtomed to beſtow upon them, is not intimate any more than that with the ſubſtances abovementioned. If the æthiops be rubbed on gold, a part of the mercury adheres to the gold ſo as to make it white: on mixture with ſyrups or other like matters into the conſiſtence of an electary or maſs for pills, a part of the mercury is generally ſpued out. The longer the quickſilver and ſulphur are ground together, the leſs they will be diſpoſed to ſeparate; a circumſtance which does not appear to obtain in the mixtures of mercury with reſinous or earthy bodies.

Æthiops cum igne, *vulgo.*

A more intimate coalition of mercury and ſulphur may be ſpeedily effected, by melting the ſulphur over a gentle fire, and gradually ſtirring into it the quickſilver, with care to cover the veſſel if an ebullition or ſwelling up of the matter ſhews it ready to catch flame; an accident which ſometimes happens when the quantities are large. This compound gives no whiteneſs to gold, and ſuffers no ſeparation of its parts on being made into electaries or other forms. Even the acid ſolvents of mercury are incapable of extracting it when thus combined with ſulphur; and the alkaline ſolvents of ſulphur extract only, by long boiling or digeſtion, ſo much of that concrete as is more than ſufficient to ſatiate the mercury.

If mixtures of quickſilver and ſulphur, thus intimately united by fire, in due proportions, as twenty-four or twenty-five parts of the former to ſeven of the latter, be powdered and ſet to ſublime; the two ingredients riſe together without ſeparation, (except that a part of the ſulphur, and generally a very conſiderable one, burns away in the proceſs,) and concrete, in the upper part of the ſubliming jar, into a red maſs called cinnabar or vermilion. This preparation, though containing much more mercury than the æthiops, does not appear to be more active; and is by many looked upon rather as a medicine of the antiſpaſmodic kind, than as poſſeſſing the proper virtues of mercurials. Indeed the real virtues, either of cinnabar or of æthiops, cannot perhaps be preciſely aſſigned.

Cinnabaris factitia *Ph. Lond.* & *Edin.*

When mercury is intimately combined with a certain quantity of ſulphur, it ſeems to operate, though given in conſiderable doſes, as a ſcruple or half a dram of the compound, only in an inſenſible manner; and in many caſes, to paſs off inactive through the inteſtinal tube *(a)*. It may be preſumed, that an increaſe of the ſulphur, beyond the quantity ſufficient for this perfect ſatiation of the mercury, will not vary its action; but that a diminution of the ſulphur will leave the mercury, or a part of it, in a ſtate of more activity; analogouſly to what has been

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(a) Cartheuſer, *rudimenta m. m. p.* 481. Malouin, *chim. medicinale, part.* iv. *ch.* 34.

before obſerved to happen in regard to the antimonial regulus. It may be preſumed alſo, that in perfect cinnabar the mercury is completely ſaturated, and that in perfect æthiops, it is both ſaturated, and blended with ſome redundant ſulphur: but that in ſome cinnabars, it is not ſaturated from a deficiency in the quantity of ſulphur; and that in ſome ſorts of æthiops it is not ſaturated, from an imperfection in the mixture. There are examples both of æthiops and cinnabar, one of which, in regard to the latter, has fallen within my own knowledge, having unexpectedly produced ſalivations. It ſhould ſeem therefore, that the æthiops made by fire is the moſt to be depended on, or the moſt certain and equal in its power, whatever this power may be, of any of the ſulphurated mercurials.

When æthiops or cinnabar are thrown on a red-hot iron, their fumes are of great activity. The fumes of cinnabar are ſometimes directed, not only to be received on the lower parts; but likewiſe to be taken into the mouth, againſt venereal ulcerations in the noſe, mouth, and throat. Of all the ways of applying mercury, this laſt requires the greateſt caution.

Mercurius calcinatus *Ph. Lond.*

QUICKSILVER, included in a flat-bottomed glaſs having a ſmall hole open to the air, and kept for ſeveral months in a conſtant heat juſt not ſtrong enough to make it evaporate, calcines by degrees into a red powder. A greater heat, ſufficient to make the mercury freely diſtil, not only does not promote the calcination, but revives ſuch part, as has been already calcined, into running mercury again. A weaker heat, as that of the human body, or even of boiling water, though continued for years, changes only a ſmall part of the mercury into a blackiſh powder: conſtant triture or agitation produces ſimilar effects to this low degree of heat, and in a much ſhorter time (a). If the free acceſs of air ſhould be found to influence the calcination of this, as it does that of the metallic bodies called imperfect, the tedious proceſs might be expedited, by uſing, for the veſſel, a glaſs tube, with both its ends bent upwards, and one of them conſiderably higher than the other; through which, a conſtant ſtream of freſh air would paſs over the ſurface of the ſmall thread of mercury at the bottom.

(a) Boerhaave, *Philoſoph. tranſact. No.* 430, 443, 444, & *Mem. de l'acad. des ſcienc. de Paris, pour l'ann.* 1734.

The red powder has been by ſome greatly eſteemed in venereal caſes, and ſuppoſed to be the moſt effectual and certain of the mercurials. It is accompanied with one conſiderable inconvenience, being greatly diſpoſed to irritate the firſt paſſages, and occaſion gripes; to prevent which, a ſmall quantity of opium, and ſome warm aromatic material, are commonly joined to it: the antivenereal pills of a late celebrated empyric are ſuppoſed to have been a compoſition of this kind. Even when thus corrected, however, it does not appear, from what I have been able to learn of its effects, to have any advantage above the mercurials in common uſe and of eaſier preparation. The doſe is from half a grain to two grains: five or ſix grains are ſaid to vomit and purge violently.

Miſaubin's pills.

Pure aqua fortis, aſſiſted by a moderate heat, diſſolves equal its weight or more of quickſilver into a limpid corroſive liquor; which, largely diluted with pure water, the common ſpring waters turning it milky and precipitating a part of the mercury, has been employed in lotions againſt ſome kinds of cutaneous defedations, and where mercurial lotions are adviſeable, is perhaps one of the beſt of them. An ointment is likewiſe prepared, for venereal ulcers, *&c.* by mixing the corroſive ſolution with fats: an ounce of quickſilver is diſſolved in two ounces of ſpirit of nitre, the ſolution poured hot into a pound of lard melted and juſt beginning to grow ſtiff, and the whole briſkly ſtirred up till an uniform yellow mixture is procured.

Ung. citrinum.

On inſpiſſating the mercurial ſolution over a gentle fire, there remains a white maſs highly cauſtic; which, calcined with a gradual heat, becomes firſt brown, then yellow, and at length, on increaſing the heat, of a deep red colour. If the aqua fortis, uſed for the diſſolution, has been previouſly drawn over from a ſmall proportion, the hundred and twenty-eighth part of its own weight, of ſea ſalt, the red maſs is ſuppoſed to aſſume more readily the ſparkling appearance which is looked upon as the characteriſtic of its goodneſs. This preparation is employed as an eſcharotic; and mixed with ointments and cerates, as a digeſtive; in which intention, Mr. Sharp obſerves, that it is very effectual.

Merc. corroſiv. ruber, *vulgo* præcipit. ruber *Ph. Edinb.* Merc. corroſiv. ruber *Ph. Lond.*

Sundry methods have been tried for abating the corroſiveneſs of this preparation, ſo far as to render it ſafe for internal uſe. One of the moſt certain ſeems to be, digeſting it two or three days, with a gentle heat, in about thrice its quantity of rectified ſpirit of wine, then ſetting fire to the ſpirit, and keeping the powder conſtantly ſtirring till all the ſpirit is burnt off. In this proceſs, the corroſive is deprived of a little of its acid, which is partly perhaps abſorbed and dulcified by the ſpirit during the digeſtion, and partly diſſipated by the heat during the burning. The medicine, nevertheleſs, is ſtill a very rough one, operating, generally, in doſes of a few grains, both upwards and downwards. Different preparations of this kind have been kept as ſecrets in particular hands, but it does not appear that any of them are ſuperiour in virtue to ſome other mercurials of greater ſafety and more equal power.

Mercurius corallinus *Ph. Lond.*

Arcanum corallinum, pulvis principis, panacea merc. rubra, *&c.*

If oil of vitriol be poured on half, or equal its weight of quickſilver, and gradually heated till the liquor boils and diſtils; the more phlegmatic parts ariſe, while the ſtronger acid corrodes the mercury into a white cauſtic maſs. On the affuſion of warm water, the maſs falls into powder, and becomes immediately yellow; a part of it, ſatiated with acid, diſſolving in the water: the larger the quantity of acid made uſe of, and the leſs thoroughly the matter has been exſiccated or calcined, the more of it will diſſolve. The yellow powder, ground with freſh quantities of water till all the ſoluble part is extracted, becomes inſipid, and in this ſtate, commonly called *turpeth* or *turbith mineral*, it proves, though not corroſive, ſtrongly emetic; operating, in this intention, the moſt effectually of all the mercurials that can be given with ſafety. It is uſed chiefly in virulent gonorrhœas, and other venereal caſes accompanied with a great flux of humours to the parts: it is ſaid likewiſe to have been employed with ſucceſs, in robuſt conſtitutions, againſt leprous diſorders, and obſtinate glandular obſtructions. The doſe, as an emetic, is from two grains to ſix or eight; though ſome conſtitutions, habituated to mercurials, can bear larger quantities: I knew an inſtance of twenty grains producing no ſenſible evacuation or diſturbance. It may be given in ſmaller doſes, as half a grain or a grain, as an alterative, after the ſame manner as the red calx of mercury already mentioned: and even when intended as an evacuant, it may perhaps, as Malouin obſerves, be moſt adviſeable, to give only a ſmall quantity at a time, as one grain, and repeat this doſe every hour till the vomiting ſucceeds.

Merc. emet. flav. *Pharm. Lond.* Merc. flav. vulgo turpeth. minerale *Ph. Edinb.*

The marine acid has no action on mercury, unleſs either the mercury be previouſly diſſolved in other acids, or the marine ſpirit be applied in a very concentrated ſtate and in the form of fume.

On adding a ſolution of ſea ſalt to a ſolution of mercury made in aqua fortis, the nitrous acid quits the mercury, and unites with the alkaline baſis of the ſea ſalt; and, at the ſame time, the acid of the ſea ſalt unites with the mercury, and forms with it a compound difficultly and only partially diſſoluble, of which, therefore, great part ſubſides, on ſtanding for ſome time, in form of a white powder. This powder, waſhed with freſh quantities of hot water, till the more ſoluble parts are extracted, becomes nearly inſipid. In this ſtate it is recommended by Boerhaave as one of the beſt of the mercurials, and ſaid, in doſes of three grains, to purge and vomit gently. It appears however too corroſive for internal uſe; being ſo much ſo, as to be employed by the farriers for the purpoſes of an eſcharotic. The preparation is likewiſe a very unfrugal one, a conſiderable part of the mercury remaining unprecipitated, and a conſiderable part of the precipitate being diſſolved and carried off in the ablution.

Merc. præcipitat. alb. *Boerhaave.*

If the dry white maſs, obtained by inſpiſſating a ſolution of mercury in aqua fortis, be powdered and mixed with equal its weight of dried ſea ſalt, the mixture put into a matras or other like veſſel, of which it may fill nearly one half, and ſet in a ſand-heat gradually increaſed; the ſame tranſpoſition of the acids will happen, as in the foregoing caſe, and nearly all the mercury will now be ſatiated with the marine acid, and form with it a ſaline compound, which ſubliming into the upper part of the matras, concretes into a white cryſtalline maſs, called corroſive ſublimate. If the vitriolic acid be uſed inſtead of the nitrous, that is, if the unwaſhed turbith be taken and mixed with ſea ſalt, the event will be the ſame; the mercury ſubliming with the acid of the ſea ſalt; while the acid, before combined with it, remains behind united with the ſea ſalt's alkali, forming therewith a *nitrum cubicum* when the nitrous acid has been uſed, and a *ſal catharticus* when the vitriolic. In like manner, if forty parts of quickſilver, rubbed with one part or more of ſublimate already made, till it is divided into minute grains, be ground with twenty-eight parts of nitre, then with thirty-three of common ſalt, and afterwards, for a little time longer, with ſixty-ſix of calcined green vitriol, and the mixture ſet to ſublime; or if to four parts of mercury diſſolved in as much nitrous acid, and evaporated to dryneſs, five parts each of calcined ſea ſalt and calcined green vitriol be added, and the mixture ſubmitted to ſublimation; the ſame compound will be produced: the acids of the nitre and ſea ſalt are

Merc. corroſ. ſublimat. vel alb. *Ph. Lond.* Mercur. ſublimat. corroſ. *Pharm. Edinb.*

are extricated by that of the vitriol: the nitrous acid aſſiſts the marine to corrode the mercury: and the mercury, combined with the marine, ſublimes, and, if the proceſs is duly conducted, concretes into a cryſtalline cake, the form in which this compound is expected in the ſhops.

Aq. phagedæn.

This preparation, undiluted, is a moſt violent corroſive. A ſolution of it in lime-water, in the proportion of a dram to a quart, and a ſtronger ſolution, made by boiling the ſame quantity of powdered ſublimate, with equal its weight of alum, in a pint of common water, till half the liquor is waſted, are employed for ſome external purpoſes, as the cleanſing of foul ulcers and ſuppreſſing fungoſities, and removing obſtinate defedations of the ſkin. The lime-water, like lixivia of fixt alkaline ſalts, precipitates a part of the mercurial preparation, and hence the impregnation of the liquor cannot be preciſely aſcertained; for the ſtronger the lime-water, the more of the ſublimate will be precipitated, and the leſs corroſive will the ſolution be: at the ſame time alſo, the lime in the water changes its nature, by its coalition with the acid which it abſorbs from the ſublimate. In the aluminous ſolution, no ſeparation happens, both the ſublimate and the alum retaining their full force: for on mixing together ſolutions of the two made ſeparately, no precipitation or turbidneſs enſued.

Aq. aluminoſa.

Small doſes of this corroſive preparation, properly diluted, have been ventured upon internally. Boerhaave relates, that if a grain be diſſolved in an ounce of water, and a dram of this ſolution ſoftened with ſyrup of violets, taken twice or thrice a day, it will perform wonders in many reputed incurable diſtempers. Van Swieten brought it into more general uſe, for the cure of venereal maladies: he diſſolves a grain of the ſublimate in two ounces of proof ſpirit, [rectified ſpirit diſſolves it more perfectly] and gives of this ſolution from one to two ſpoonfuls twice a day; continuing the medicine ſo long as any of the ſymptoms remain, with a low diet, and plentiful dilution. In the medical obſervations and inquiries, publiſhed by a ſociety of phyſicians in London, there are many inſtances of the ſucceſs of this method: the ſublimate operated chiefly by urine and ſweat, though ſometimes, for the firſt two or three days, by ſtool; and appeared not only ſafe, but more to be depended on, for the removal of the ſymptoms, than any of the other mercurials uſed as alteratives. If it be true, as ſome have preſumed, that the completeneſs of the cure has any dependence on the quantity of mercury introduced into the blood(a); it would follow, that the cure by ſublimate muſt be leſs complete than that obtained by any other mercurial preparation, and that thoſe preparations which can be taken without diſturbance in conſiderable doſes, as five or ſix grains or more, promiſe the moſt laſting cures: experience however has now ſufficiently ſhewn, that the cures obtained by ſublimate are in general perfect.

Corrosive ſublimate conſiſts of mercury, united with ſo much marine acid, as to be diſſoluble in boiling water. If by ſeparating a part of the acid, or adding more mercury, the proportion of acid is rendered ſo ſmall, as that no part of the compound ſhall be diſſoluble, when finely powdered, by long boiling in water; its corroſiveneſs will be deſtroyed, and it may now be taken with ſafety in doſes of ſome grains. A little volatile ſpirit or alkaline lye, dropt into the water after the boiling, will diſcover if it has taken up any part of the mercury, by turning it cloudy or yellow: rain, ſnow, or rather diſtilled water, ſhould be employed for this trial, as the common ſpring waters are themſelves made cloudy by alkalies.

Spirit of ſal ammoniac, or other volatile alkalies, dropt into a filtered ſolution of ſublimate, abſorb a part of the acid; and the mercury, retaining ſo little as to be indiſſoluble, renders the liquor milky, and ſubſides, on ſtanding, in form of a fine white powder, which, waſhed by repeated affuſions of hot water, becomes inſipid. Solutions of fixt alkaline ſalts, ſubſtituted to the volatile ſpirit, produce a yellow precipitation: but if an equal weight of crude ſal ammoniac be diſſolved along with the ſublimate, fixt alkalies, added to this ſolution, extricate the volatile alkali of the ſal ammoniac, and the precipitate proves the ſame, as if the volatile alkali alone had been added in its pure ſtate. Theſe precipitates are uſed chiefly on account of the elegance of their colour, in unguents for cutaneous eruptions: one part of the mercurial precipitate, three of precipitated ſulphur, and eighteen of the ſimple ointment or pomatum, moiſtened with a little ſtrong alkaline lye, make the common mercurial application for theſe complaints. The precipitates have been given internally; but *mercurius dulcis*, which differs from them only in being more mild, and more equal and certain in its effects, is in this

Merc. præcipit. albus *Ph. Edinb.*

Merc. præcipit. albus *Ph. Lond.*

Unguent. e merc. præc. *Ph. Lond.*

(a) Aſtruc, *De morbus venereis, tom.* i. *lib.* ii. *cap.* 12.

this intention greatly to be preferred. It does not appear, that a combination of mercury with ſo ſmall a proportion of acid, that is, ſo mild and ſafe a mercurial, can be obtained by any kind of precipitation, as by the proceſs by which *mercurius dulcis* is prepared.

Mercurius dulcis is ſublimate made mild, by combining with it ſo much freſh mercury, as is ſufficient to ſatiate the redundant acid. Four parts of powdered ſublimate are ground with three, or three and a half of quickſilver (an operation in which great caution is neceſſary, to avoid the lighter corroſive particles that fly off) till they are thoroughly incorporated; or, which is much more commodious, digeſted together in a gentle heat, by which the union will be performed as effectually. The mixture is then ſublimed in a glaſs matras or phial; the ſublimed white maſs freed from the whitiſh acrid matter about the mouth of the veſſel, and from ſuch mercurial globules as may happen to appear diſtinct, then pulverized, and ſublimed again: the college of Edinburgh directs the ſublimation to be repeated three or four times, that of London ſix times. By repeated ſublimations, if a ſufficient quantity of mercury has not been united at firſt, the medicine becomes leſs liable to irritate the firſt paſſages and run off by ſtool; on account of ſome ſmall part of the acid, or ſome portion of the compound not fully dulcified in the firſt operation, being ſeparated or diſſipated by the heat. The dulcification depends ſolely on the combination of ſo much freſh mercury with the ſublimate, as may fully ſatiate the acid: the union of the two is effected by the digeſtion previous to the ſublimation: and the only uſe of the ſublimation itſelf is to ſeparate ſuch part as may remain undulcified, this part being the moſt volatile.

Merc. dulcis ſubl. *Pharm. Lond.&Edin.*
Aquila alba.
Calomelas.

Mercurius dulcis appears to be the beſt and ſafeſt of the mercurial preparations that can be taken in a ſolid form, whether as a ſialagogue or as a general alterant; no one of the mercurials, whoſe tranſmiſſion into the blood can be depended on, being ſo little diſpoſed to affect the firſt paſſages. As a ſialagogue, five, ten, and ſometimes fifteen grains, made into a bolus or pills, are repeated every night or oftener, till the ptyaliſm begins. As an alterative, it is given from one to two or three grains. It generally anſwers beſt in ſmall doſes, which may be repeated, with due caution, every evening, for a conſiderable time, without inconvenience.

Mercury, precipitated from aqua fortis by fixt alkali, diſſolves totally, by the aſſiſtance of heat, in diſtilled vinegar: on cooling, the ſalt cryſtallizes into fine brilliant plates, which float in the liquor like pieces of ſilver leaf, and are very difficult of ſolution in water. This ſalt, as appears from the experiments of Hellot and others *(a)*, is the baſis of an antivenereal medicine which has lately come into great repute abroad, but which does not ſeem, from the accounts that have been publiſhed of it, to be either more ſafe, or more effectual, than ſome of the common officinal mercurials.

Keyſer's pills.

In ſome obſtinate defedations of the ſkin, mercurials and antimonials, joined together, have frequently better effects than either of them unaſſiſted by the other. Some triturate quickſilver with twice its weight of crude antimony, till the mercurial globules diſappear, and the mixture becomes an uniform æthiops or black powder: others, inſtead of the crude antimony, uſe the medicinal regulus, or the golden or precipitated ſulphur; and thus obtain an æthiops of more activity. The college of Edinburgh has given a preſcription of pills on this principle, compoſed of three parts of quickſilver, two parts each of golden ſulphur of antimony, gum guaiacum and honey, and ſo much mucilage of gum-arabic as will reduce them into a maſs of a due conſiſtence: if a dram of the maſs is made into twenty pills, the doſe may be increaſed from one to ſix or more, according to the operation.

Æthiops antimonialis.

Pil. æthiopicæ *Ph. Edinb.*

Some of the mercurial preparations have been ſaid to be oftentimes ſophiſticated; the cinnabar and red corroſive with red lead, the corroſive ſublimate and mercurius dulcis with arſenic. The red lead may be readily diſcovered by fire; the mercurial part evaporating, while the ſaturnine remains behind. With regard to the other abuſe, ſome have affirmed it to be impracticable *(b)*; for if arſenic be mixed with ſublimate, and the mixture ſet to ſublime, the marine acid quits the mercury, and unites with the arſenic; with which it compoſes, not a ſolid cryſtalline, but a ſoft butyraceous concrete, called by the chemiſts butter of arſenic. If arſenic ſhould nevertheleſs, in certain circumſtances *(c)*, be combinable with the ſublimate into a cryſtalline cake; and if the pernicious artifice

(a) *Memoires de l'acad. roy. des ſciences de Paris*, 1759.

(b) Neumann, *Chemical works, p.* 142.

(c) Pott, *De ſale communi, p.* 76.

ſhould be ever practiſed, the reports of which we preſume to be groundleſs; the well known properties of arſenic afford ſufficient means for detecting it. If a compound of ſublimate and arſenic be mixed with equal its weight or more of fixt alkaline ſalt, chalk, or vegetable aſhes, and expoſed to a moderate heat, the arſenic will ſublime into the upper part of the glaſs, and may now be diſtinguiſhed by its own proper characters. Some recommend alkaline lixivia as a criterion of this abuſe: ſublimate that contains arſenic being ſaid to give a black colour with the alkali: on what foundation this ſhould happen, I cannot conjecture; for arſenic ſtrikes no blackneſs with alkalies either fixt or volatile; ſolutions of it are, on the contrary, by both alkalies made white.

ARISTOLOCHIA.

BIRTHWORT: a plant with heart-ſhaped leaves ſet alternately on the ſtalks; in the boſoms of which come forth irregular tubulous flowers, with a wide mouth, whoſe lower part is produced into a long flap like a tongue: the ſeed-veſſel is large, roundiſh, and divided into ſix cells.

1. Aristolochia longa *Pharm. Lond. & Linn. Ariſtolochia longa vera C. B.* Long birthwort, with uncut leaves, ſtanding on pedicles; and oblong roots, not tapering to a point, browniſh on the outſide and yellow within.

2. Aristolochia rotunda *Linn. Ariſtolochia rotunda flore ex purpura nigro C. B.* Round birthwort: with uncut leaves joined immediately to the ſtalks, and roundiſh roots.

3. Pistolochia: *Ariſtolochia tenuis Pharm. Pariſ. Ariſtolochia piſtolochia dicta C. B. & Linn.* Buſhy birthwort: with indented leaves ſet on pedicles; and buſhy roots, compoſed of a number of fibres iſſuing from one head. In this and the foregoing ſorts, the ſtalks are weak and trailing, and the flowers ſtand ſolitary.

4. Aristolochia tenuis *Pharm. Lond. & Edinb. Ariſtolochia clematitis recta C. B. Ariſtolochia clematitis Linn.* Creeping birthwort:

wort: with upright ſtalks, flowers ſtanding in cluſters, and long ſlender creeping roots rarely exceeding the thickneſs of a gooſe quill.

These plants are natives of the ſouthern parts of Europe, from whence we are ſupplied with the dry roots. They bear the colds of our own climate; the third ſort excepted, which dies in ſevere winters. The fourth ſpreads faſt, to a great diſtance, ſo as not to be eaſily extirpated.

All the birthwort roots have ſomewhat of an aromatic ſmell, and a warm bitteriſh taſte. They are repreſented by authors, as being extremely hot and pungent: Boerhaave ſays, they are the hotteſt of the aromatic plants, and, as it were, burn the tongue and palate, having probably examined the freſh roots; but whatever their qualities may be in that ſtate, ſuch as are uſually met with in the ſhops, have no great pungency. The long and round ſorts, on firſt chewing, ſcarce diſcover any taſte, but in a little time prove nauſeouſly bitteriſh; the round ſomewhat the moſt ſo. The other two inſtantly fill the mouth with a kind of aromatic bitterneſs, not very ungrateful.

Theſe roots give out their virtue by infuſion both to ſpirituous and watery menſtrua, to the firſt moſt perfectly: the colour of all the tinctures is browniſh or yellowiſh. In diſtillation, pure ſpirit brings over little or nothing: with water there ariſes, at leaſt from both the ſlender rooted ſorts, a ſmall portion of eſſential oil, poſſeſſing the ſmell and flavour of the roots. The extracts made with ſpirit ſmell moderately, and taſte ſtrongly, of the birthworts: the watery extracts have nothing of their peculiar flavour, and are much more nauſeous in taſte than either the ſpirituous extracts, or the roots in ſubſtance.

The birthwort roots are celebrated as warm attenuants and deobſtruents, particularly in ſuppreſſions of the uterine purgations, from which virtue they are ſuppoſed to have received their name: the doſe is from a ſcruple to a dram and upwards. They have likewiſe been recommended, particularly the fourth ſort, as alterants in the gout: Boerhaave obſerves, that the pituitous gout, as he calls it, is often relieved by an infuſion of theſe roots in ſpirit of juniper berries, ſweetened with ſugar, and taken to the quantity of a ſpoonful at a time; but that in other kinds of the gout, and in ſubjects of a tender conſtitution, this medicine occaſions a loſs of appetite, a weakneſs of the ſtomach, and a languidneſs, leſs ſupportable than the gout itſelf. A powder compoſed of this and other ſimilar materials, which was preſcribed by the ancients as an antiarthritic, and has lately come again into eſteem, has alſo produced complaints of the ſame kind. Externally theſe roots have been uſed as diſcutients, detergents, and antiſeptics: Simon Paulli relates, that the long birthwort roots, applied as an epithem or in fomentation, were found remarkably ſerviceable in ſtubborn ulcers of the legs.

ARSENICUM.

ARSENICUM ALBUM Pharm. Pariſ. Arſenicum ſimpliciter dictum. ARSENIC OR WHITE ARSENIC: a ſemitranſparent cryſtalline concrete, aſſuming an opake milky hue on being expoſed for ſome time to the air: ſoluble plentifully in alkaline lixivia, more ſparingly in oils, and ſtill more ſo in acids; diſſolving alſo, by the aſſiſtance of a boiling heat, in water, but ſeparating and cryſtallizing in great part as the liquor cools; totally exhaling, by a heat below ignition, in thick fumes, diſtinguiſhable from thoſe of all other known mineral ſubſtances, by a ſtrong fetid ſmell reſembling that of garlic.

The fumes, caught in veſſels, condenſe, either into a cryſtalline form again, or into a powdery one, according as the receiver is leſs or more removed from the action of the heat. If the arſenic be mixed with vegetable or animal coals, or other inflammable ſubſtances not ſulphureous, that is, not participating of vitriolic acid, and expoſed to a moderate heat without communication with the air, it ſublimes in form of a bright greyiſh metallic ſubſtance, quickly tarniſhing to a black, lighter and leſs compact than moſt of the other metallic bodies, ſcarcely ſeven times ſpecifically heavier than water, changeable into a calx or white arſenic again by ſublimation with the admiſſion of air.

Arſenic is contained, in greater or leſs quantity, in the ores of moſt metallic bodies, particularly in thoſe of tin and biſmuth, and in the mineral called cobalt, *cobaltum*, *cadmia metallica*; from which laſt, greateſt part of the arſenic brought to us is extracted, in Saxony, by a kind of ſublimation: the arſenic riſes at firſt into a large horizontal chimney communicating with the furnace, in form of a greyiſh meal, which, more carefully reſublimed, concretes into the cryſtalline white arſenic of the ſhops. Henckel obſerves, that of all the metallic bodies, mercury and the antimonial metal are the only ones which are never found to have any arſenic in their ores: to theſe perhaps may be added zinc, whoſe proper ore, calamine, appears to be pure from arſenic.

WHITE arſenic is one of the moſt violent poiſons. Beſides the effects, which it produces in common with other poiſonous ſubſtances, it is ſaid to render the coats of the ſtomach remarkably thin, to occaſion a ſwelling and ſphacelation of the whole body, and a ſudden putrefaction after death, particularly of the genitals in men *(a)*. Where the quantity taken has been ſo ſmall as not to prove fatal, tremors, palſies, and lingering hectics ſucceed. It has likewiſe been obſerved to produce very dangerous, and ſometimes mortal ſymptoms, when applied externally *(b)*, which it was formerly recommended to be, againſt cancers and ſcrophulous tumors.

* This dangerous mineral has of late been conſidered by ſome as a real ſpecific againſt the cancerous virus. Mr. Le Febure has ventured publicly to recommend its *internal* uſe, together with a topical application of it to the affected part, in cancerous caſes; and poſitively affirms that he has found it efficacious in more than two hundred inſtances, without any bad effects. He gives a very dilute ſolution of white arſenic, mixed with milk and ſyrup of poppies. Mr. Juſtamond, who publiſhed a treatiſe on cancers two or three years ſince, agrees with the above-mentioned author in the idea that arſenic is ſpecific againſt this diſeaſe, but laments that even the moſt guarded *external* uſe of it, while it produces the happieſt effects in healing cancerous ulcers, yet occaſions ſuch diſagreeable ſymptoms of the paralytic kind, that it cannot be perſiſted in. The lateſt trials in London are ſaid to confirm this account.

The remedies againſt this, as againſt moſt other poiſons, are, milk and oily liquors, immediately and liberally drank. Hoffman tells us of ſeveral perſons of diſtinction, who, on taſting food with which white arſenic had been mixed inſtead of ſugar, were all ſeized with anxiety at the breaſt, pain at the ſtomach, tremor of the lips, and reachings: milk

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(a) Stahl. *Menſ. Novemb. cap.* iv. *opuſc. p.* 454, 455. Lindeſtolpe, *De venenis, edit. Stentzel, cap.* xvi. *theſ.* x. *p.* 755.

(b) Degner, *Hiſt. dyſenteriæ bilioſæ, p.* 214. Hildanus, *Obſ. p.* 606. Heimrich, *Act. nat. cur. vol.* ii. *obſ.* 10. Fernelius, *De methodo medendi, lib.* vi. *cap.* 18.

and oil were poured down, plentifully and repeatedly, ſo as to keep them ſtrongly vomiting for half a day; ſome vomited no leſs than an hundred times: by this ſimple remedy they all eſcaped *(a)*, and ſome inſtances of the ſame kind have fallen within my own knowledge. Tachenius relates, that convulſions of the limbs, gripes, bloody urine with inexpreſſible pain, and a contraction of the whole body, which he had been ſeized with from expoſure to the fumes of arſenic, being relieved by milk and oil, a ſlow fever ſucceeded, which continued during the winter, and of which he was at laſt cured by decoctions of the vulnerary herbs, and by the uſe of cabbage ſprouts with orange juice, oil, and a little ſalt *(b)*. * Sage, in his *Mineralogy*, ſays that the regulus is far leſs dangerous than the calx or glaſs: he gave half an ounce of the regulus to a cat; who grew *meager* for ſome time, but afterwards fat again—that acids, particularly vinegar, are the antidotes to this poiſon. Oils and emulſions do not obtund its effects as acids do; of this he has had experience on brutes—that the regulus is not ſoluble in water; and that the founders are more afraid of fumes of lead than of arſenic.

SULPHUR, which reſtrains the power of mercury and the antimonial metal, remarkably abates the virulence of arſenic; compoſitions of arſenic and ſulphur being far leſs poiſonous than the pure white arſenic, and thoſe, in which the quantity of ſulphur is conſiderable, ſeeming to be almoſt innocent. Different compoſitions of this kind are both prepared by art, and found native in the earth.

Arſenicum flavum.

The bright yellow, ſomewhat tranſparent maſſes, called *yellow arſenic*, are prepared, by mixing the arſenical meal, as extracted by the firſt ſublimation from the ore, with one tenth its weight of ſulphur, and ſubliming them together: on doubling the quantity of ſulphur, the compound proves more opake and compact, of a deep *red* colour, reſembling in the maſs that of cinnabar, but loſing of its beauty on being ground into powder, whilſt that of cinnabar is improved by trituration: by varying the proportions of arſenic and ſulphur, ſublimates may be obtained of a great variety of ſhades of yellow and red. The foſſil ſulphurated arſenics differ remarkably in texture as well as in colour, ſome

Arſenicum rubrum.

(a) Hoffman, *Syſt. med. rat. de feb. ſect.* ii. *cap.* iii. *obſ.* iii.

(b) Tachenius, *Hippocrates chymicus, p.* 149.

being ſmooth and uniform like the factitious maſſes, and others compoſed of ſmall ſcales or leaves; the former are commonly diſtinguiſhed by the name *zarnichs,* the latter by that of *auripigmenta* or *orpiments:* the orpiments are the only ſubſtances to which the Greeks gave the name *arſenicon,* the preparation of white arſenic being a diſcovery of later years: the red zarnichs are the *ſandarache* of the Greeks, and the *realgar* and *riſigal* of the Arabians and ſome of the chemical writers.

That theſe foſſils are really ſulphurated arſenics is evident from ſundry experiments. When ſet on fire, the arſenical, as well as the ſulphureous ſmell, is plainly diſtinguiſhable. If triturated with quickſilver, and expoſed to a ſuitable heat, the ſulphur is detained by the mercury, and a pure white arſenic ſublimes. A mixture of fixt alkaline ſalt, with any vegetable or animal ſubſtance, as the compound called by the aſſayers *black flux,* in like manner keeps down the ſulphur, and at the ſame time revives the arſenic into its reguline or metallic form.

All theſe compounds are mild, compared to the white arſenic; and ſeveral of them are looked upon by many as having no poiſonous quality. Some, both of the factitious and native, have been given to dogs in conſiderable quantities, without producing any ill effect. The native minerals have been uſed as medicines in the eaſtern countries, and by ſome imprudently recommended in our own.

ARTEMISIA.

ARTEMISIA Pharm. Lond. & Edinb. Artemiſia vulgaris major C. B. Artemiſia vulgaris Linn. MUGWORT: a plant, with firm ſtalks, generally purpliſh; deeply divided leaves, reſembling thoſe of common wormwood, of a dark green colour above, and hoary underneath; and ſmall, purpliſh, naked, diſcous flowers, ſtanding erect, in ſpikes, on the tops of the branches. It is perennial, grows wild in fields and waſte grounds, and flowers in June.

THIS plant has been chiefly recommended for promoting the uterine evacuations, and abating hyſteric ſpaſms; for which purpoſes, infuſions of it have been drank as tea and uſed as a bath. It appears to be one of the mildeſt of the ſubſtances commonly made uſe of in ſuch intentions; and may, perhaps, be of ſervice, in ſome caſes, where medicines of more activity would be improper.

The leaves have a light agreeable ſmell, eſpecially when rubbed a little; but ſcarcely any other than an herbaceous taſte. An extract made from them by water is likewiſe almoſt inſipid; and an extract made by ſpirit has only a weak aromatic bitteriſhneſs. Baierus informs us, in a diſſertation on this plant, that by fermenting a large quantity of it, and afterwards diſtilling, and cohobating the diſtilled water, a fragrant ſapid liquor was obtained, with a thin fragrant oil on the ſurface. The flowery tops are conſiderably ſtronger than the leaves, and hence ſhould ſeem to be preferable for medicinal uſe.

ARTHANITA.

ARTHANITA, Cyclamen, Pharm. Edinb. (a) *Cyclamen orbiculato folio inferne purpuraſcente C. B. Cyclamen europæum Linn.* SOWBREAD: a low plant, without any other ſtalk than the ſlender pedicles of the leaves and flowers: the leaves are pretty large, round, of a green colour above with white ſpecks, and purpliſh underneath: the flowers purpliſh, monopetalous, deeply divided into five ſegments, followed by round ſeed-veſſels: the roots large, ſomewhat globular, with ſeveral fibres, blackiſh on the outſide and white within. It is perennial, a native of the ſouthern parts of Europe, and cultivated in ſome of our gardens.

THE freſh roots of arthanita have a nauſeous, acrid, biting taſte, and no remarkable ſmell: by drying, their acrimony is greatly abated; by long keeping, it is almoſt deſtroyed; though after they have loſt ſo much as to make very little impreſſion on the organs of taſte, they ſtill betray, when taken internally, a great degree of irritating power. Dried and powdered, they have been given in doſes of a dram, and found to operate as a ſtrong inflammatory, yet ſlow cathartic. The juice is ſaid to purge when applied externally to the belly in ointments; and the juice or bruiſed root to be of great efficacy for ſoftening and diſcuſſing indolent hard tumours. The flowers are of a different nature, having a moderately ſtrong and very pleaſant ſmell, and little other than a mucilaginous taſte: they have not been uſed medicinally, and the uſe of the roots is now, among us, in great meaſure laid aſide.

(a) Expunged.

ARUM.

ARUM Pharm. Lond. & Edinb. Arum maculatum maculis nigris C. B. Arum maculatum Linn. WAKE-ROBIN or CUCKOWPINT: a low perennial plant, growing wild under hedges and by the ſides of banks. It ſends forth, in March, three or four ſmooth leaves, triangular, or ſhaped like the head of a ſpear: theſe are ſucceeded by a naked ſtalk, bearing a purpliſh piſtil incloſed in a long ſheath, which is followed, in July, by a bunch of red berries: the root is irregularly roundiſh, about an inch thick, browniſh on the outſide and white within. In ſome plants the leaves are ſpotted with black, in others with white ſpots, and in others not ſpotted at all: the black ſpotted ſort is ſuppoſed to be the moſt efficacious, and hence is expreſsly directed by the London college. All the ſorts are ſaid to be ſtronger, when produced in moiſt ſhady ſoils, than in dry open expoſures.

THE freſh roots of arum have an extremely pungent acrimonious taſte: ſlightly chewed, they continue to vellicate and burn the tongue, the part which they principally affect, for many hours, producing at the ſame time a conſiderable thirſt: theſe uneaſy ſenſations are ſomewhat alleviated by milk, butter, or oily liquors. The other parts of the plant are likewiſe highly acrid, though rather leſs ſo than the roots. No part has any ſmell, except the piſtil, which has a faint fetid one.

This root loſes greateſt part of its acrimony on being dried ſufficiently to become pulverable. Kept dry for ſome time, it ſeems, on firſt chewing, to be an inſipid farinaceous ſubſtance: it ſtill, however, retains a kind of latent pungency, ſo as when chewed long, in any conſiderable quantity, to produce a ſenſation as of a ſlight excoriation of the tongue. Parkinſon obſerves, that the white farinaceous ſtarch-like powder has been uſed in waſhing, and that it has ſometimes bliſtered the hands.

The freſh root, dug up in autumn, yielded upon expreſſion about one ſixth its weight of a milky juice; which, on ſtanding, depoſited a white Fœcula ari. fecula and became clear: the clear liquor was inſipid: the fecula was conſiderably pungent, but, like the root in ſubſtance, loſes its pungency on being dried. The freſh and the moderately dried roots were digeſted in water, in wine, in proof ſpirit, and in rectified ſpirit, with and without heat: the liquors received no colour, and little or no taſte. In diſtillation, neither ſpirit nor water brought over any ſenſible impregnation from the arum: the watery and ſpirituous extracts alſo were nearly inſipid. The root, nevertheleſs, loſes in theſe operations almoſt the whole of its pungency.

The root may be preſerved freſh in ſand for ſeveral months; and if the ſand is ſomewhat moiſt, ſo as to ſuffer it to vegetate, it will be the better ſecured both from rotting and from loſing of its virtue. It appears to be of equal vigour, or at leaſt of ſufficient vigour for medicinal uſe, at all periods of its growth, and in all ſeaſons of the year. As it has hitherto been uſed only in a dry ſtate, it has been generally taken up about the time of the plant beginning to dye, as the root is then leaſt juicy, and ſhrinks leaſt in drying.

Arum root, newly dried and powdered, is given in doſes of a ſcruple and upwards; for ſtimulating the ſolids, attenuating viſcid juices, and promoting the natural ſecretions; in cold, languid, phlegmatic habits; againſt weakneſs and relaxations of the ſtomach, and catarrhous and rheumatic diſorders. It has been generally given in conjunction with other materials, and to ſome of theſe the effects of the compound have been in great part aſcribed; thus, in the officinal powders of arum, ſixteen grains of the dry root are accompanied with eight grains of the pungent roots of pimpinella, the ſame quantity of thoſe of the yellow water flag, four grains of cinnamon, and two grains of ſalt of wormwood, with four grains of crabs-eyes. In the medicine recommended by Sydenham againſt rheumatiſms, the acrid antiſcorbutic herbs are largely joined to it.

Pulv. ari compoſit. *Ph. Lond.*

The vinous and ſpirituous tinctures of this root, by ſome recommended, appear, from the experiments above related, to be inſignificant: but though ſpirituous liquors are incapable of diſſolving or extracting the active matter of the arum, they ſeem nevertheleſs, when given along with the dried root as a vehicle, to promote its action: Juncker obſerves, that a dram of the powder, taken with a ſpoonful of brandy, procures a very copious ſweat, even in perſons little diſpoſed to that evacuation; while the powder, by itſelf, has no ſuch effect *(a)*.

The inſupportable pungency on the tongue, which has hitherto prevented this root from being uſed in a freſh ſtate ſo as to exert its full

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(a) *Conſpectus therapiæ, tab. de diaphoreſi, p.* 99.

virtues, I have found to be effectually covered by unctuous and gummy materials. The freſh root, beaten into a ſmooth maſs, with the addition of a little teſtaceous powder which promotes the diviſion of it, may either be mixed with about an equal quantity of powdered gum-arabic, and three or four times as much conſerve, ſo as to make them into an electary; or rubbed with a thick mixture of mucilage of gum-arabic and ſpermaceti, gradually adding any ſuitable watery liquors and a little ſyrup, ſo as to form an emulſion: two parts of the root, two of gum, and one of ſpermaceti, make an emulſion which ſcarcely impreſſes any degree of pungency though kept long in the mouth. In theſe forms I have given the freſh root from ten grains to upwards of a ſcruple, three or four times a day: it generally occaſioned a ſenſation of ſlight warmth, firſt about the ſtomach and afterwards in the remoter parts, manifeſtly promoted perſpiration, and frequently produced a plentiful ſweat. Several obſtinate rheumatic pains were removed by this medicine, which is therefore recommended to further trial.

ASA FOETIDA.

ASA FOETIDA Pharm. Lond. & Edinb. Laſer. Laſerpitium. Sylphium. ASAFETIDA: the fetid concrete juice of a large plant, growing in the mountains of the provinces of Choraſaan and Laar in Perſia, called by Kæmpfer *umbellifera leviſtico affinis, &c.* "The umbelliferous plant akin to lovage, with branched leaves like thoſe of "piony, a very large full ſtalk, and naked ſolitary foliaceous ſeeds like "thoſe of parſnep or cow-parſnep, yielding aſafetida from its root." It is the *Ferula Aſſa Fœtida* of Linnæus. The root of the plant, when grown to a proper age and ſize, is bared of earth at the top, ſkreened from the ſun by the leaves that have been pulled off, after ſome days cut horizontally, and again carefully ſkreened: the juice gradually riſes, and in a day or two is accumulated on the ſurface; and being thence collected, the ſuperficial part of the root, that has become dry, is cut off, to allow an exit to the remainder of the juice. A particular detail of this proceſs may be ſeen in Kæmpfer's *amœnitates exoticæ.* This juice, as it firſt iſſues from the root, is liquid and white like milk: on being expoſed to the air, it turns browniſh, and gradually acquires different degrees of conſiſtency. It is brought to us in large irregular maſſes, compoſed of various ſhining little lumps or grains, which are partly whitiſh, partly of a browniſh or reddiſh, and partly of a violet hue. Thoſe maſſes are accounted the beſt, which are clear, of a pale reddiſh colour, and variegated with a great number of fine white tears.

THIS juice has a ſtrong fetid ſmell approaching to that of garlic, and a nauſeous bitteriſh biting taſte. It is by much the ſtrongeſt of the deobſtruent warm fetid gums; and is given not only againſt hyſterical complaints, flatulent colics, and obſtructions of the breaſt; but in moſt of the diſorders called nervous, in which it frequently acts as an antiſpaſmodic and an anodyne: in ſome caſes muſk, and in ſome opium, are uſefully joined to it. It is ſometimes uſed alſo as an anthelmintic, and ſaid by Hoffman to be one of the capital medicines of that claſs. It is moſt commodiouſly taken in the form of pills; from a few grains to a ſcruple or half a dram. It loſes with age of its ſmell and ſtrength; a circumſtance to be attended to in doſing it: Kæmpfer informs us, from his own obſervation, that a ſingle dram of the recent juice ſmells more than an hundred pounds of ſuch as is commonly ſold in Europe.

Aſafetida is compoſed of a gummy and a reſinous ſubſtance, the firſt in largeſt quantity. Its ſmell and taſte reſide in the reſin; which is readily diſſolved and extracted by pure ſpirit, and, in great part, along with the gummy matter, by water. The tincture made in pure ſpirit is of a tranſparent yellow colour; that made in proof ſpirit, and the watery infuſion, is turbid. A tincture in rectified ſpirit is kept in the ſhops; whereof two drams contain nearly all the virtue of fifteen grains of the aſafetida.

Tinctura fœtida *Ph. Londinenſ.*

In diſtillation with water, it impregnates the aqueous fluid highly with its ſcent, and yields a ſmall portion of a pale-coloured eſſential oil which ſmells exceeding ſtrongly: the remaining decoction, inſpiſſated, leaves a weakly nauſeous bitteriſh extract, of very little ſmell. Rectified ſpirit diſtilled off from the tincture made in that menſtruum, proves likewiſe conſiderably impregnated with the flavour of the aſafetida, though much leſs ſo than the diſtilled water: the remaining extract ſmells moderately, and taſtes ſtrongly of the juice.

ASARUM.

ASARUM Pharm. Lond. & Edinb. C. B. Nardus ruſtica; Vulgago. Aſarum europæum Linn. ASARABACCA: a low plant without ſtalks:

the leaves are ſtiff, roundiſh, with two little ears at the bottom, ſomewhat reſembling a kidney, of a dark ſhining green colour, ſomewhat hairy, ſet on pedicles three or four inches long: the flowers, which riſe among the leaves on ſhorter pedicles, conſiſt of purpliſh ſtamina ſtanding in a darker coloured cup, and are followed, each, by a capſule containing ſix ſeeds. It is perennial and evergreen, a native of the ſouthern parts of Europe and the warmer climates, and raiſed with us in gardens. The dried roots have been generally brought from the Levant; thoſe of our own growth being ſuppoſed of weaker virtue.

The roots and leaves of aſarum have a moderately ſtrong, not very unpleaſant ſmell, ſomewhat reſembling that of valerian or nard; and a nauſeous bitteriſh, acrid taſte. The roots given in ſubſtance, in doſes of a ſcruple or more, prove ſtrongly emetic and cathartic. The leaves have the ſame operation, but their doſe or degree of force has not been preciſely determined: according to ſome, they are of more activity than the roots.

It is ſaid, that this emetic plant has been of ſervice in ſerous diſorders, and hurtful in melancholic caſes: that in ſmall doſes, it promotes perſpiration, urine, and the uterine flux: that tinctures made in ſpirituous liquors poſſeſs both the emetic and cathartic virtues of the aſarum: but that the extracts, obtained by inſpiſſating theſe tinctures, act only, and with ſufficient mildneſs, by vomit; requiring to be given in as large doſes as the plant in ſubſtance, to produce as plentiful evacuations: that infuſions in water operate mildly both upwards and downwards: that by coction in water, the emetic power is firſt deſtroyed, and afterwards the purgative; the decoction long boiled, or an extract prepared with a large quantity of water not acting at all by ſtool or vomit, but proving powerfully deobſtruent, diuretic, *&c.* It is obvious, however,, as the activity of the aſarum is diminiſhed more and more by boiling, that both the decoction and the extract muſt be accompanied with one capital inconvenience, precariouſneſs in point of ſtrength.

The principal uſe of aſarum among us is as an errhine. The root is one of the ſtrongeſt of the vegetable ſubſtances commonly employed in this intention: a grain or two, ſnuffed up the noſe, procure a large evacuation of mucus both from the noſe and mouth, without provoking ſneezing like the white hellebore root, or diſcovering any remarkable irritation. The leaves, though ſuppoſed to be ſtronger than the roots as emetics and cathartics, appear to be milder as errhines. Geoffroy relates, that after ſnuffing a doſe of this errhine, he has obſerved the ſalutary diſcharge to continue for three days together, and that he has known a paralyſis of the mouth and tongue cured by one doſe: he recommends this medicine in ſtubborn diſorders of the head proceeding from viſcid matters, in palſies, and in ſoporific diſtempers. During its operation, the patient muſt carefully avoid cold; which is apt to produce puſtules, inflammations, and ſwellings of the face, and ſometimes more alarming ſymptoms. This herb is a principal ingredient in the cephalic or ſternutatory powders of the ſhops: ſome take three parts of dried aſarum and one of marjoram leaves,† others equal parts of the dried leaves of aſarum, marjoram, and marum ſyriacum, and dried lavender flowers‡. The empyrical herb ſnuffs have likewiſe the leaves of aſarum for their baſis, but often mixed with ingredients of a more dangerous nature.

† Pulv. cephalicus *Ph. Edinb.*

‡ Pulv. ſternutatorius *Ph. Lond.*

ASPARAGUS.

ASPARAGUS Pharm. Edinb.(a) *Aſparagus ſativa C. B. Aſparagus officinalis Linn.* ASPARAGUS: a perennial plant, cultivated for culinary uſe. In the ſpring appear a number of ſtraight naked ſhoots; which, riſing to the height of two or three feet, divide into ſlender, firm, ſpreading branches, clothed with ſoft, green, capillary leaves: the flowers are of a pale greeniſh colour, and ſucceeded by ſhining red berries.

THE young ſhoots of aſparagus, boiled, are ſuppoſed to promote appetite, but afford little nouriſhment. They give a ſtrong fetid ſmell to the urine in a little time after being eaten, and for this reaſon have by ſome been accounted uſeful diuretics, by others injurious to the kidneys. It does not appear, from common experience, that they poſſeſs either of theſe qualities in any conſiderable degree.*(b)

The roots of the plant, which are the part principally employed for medicinal purpoſes, are leſs agreeable in taſte than the young ſhoots, and ſuppoſed to be more aperient and diuretic: they appear to be ſimilar, in virtue as in taſte, to the roots of fennel, parſley, and the others commonly called aperient, to which they have been ſometimes joined in apozems and infuſions. It is obſervable, that neither the roots, nor the ſtalks when grown up ſo as to part into branches, give any ill ſmell to the urine.

(a) Expunged.

*(b) Bergius aſſerts that he knew a lady who after eating aſparagus generally made bloody urine. *Mat. Med. p.* 268.

ATRIPLEX OLIDA.

ATRIPLEX OLIDA Pharm. Lond. Atriplex fœtida Ph. Edinb. & C. B. Chenopodium fœtidum Tourn. Chenopodium Vulvaria Linn. Blitum fœtidum vulvaria dictum Raii ſyn. Garoſmum. STINKING ORACHE or ARACH: a low, procumbent plant, ſprinkled all over with a whitiſh clammy meal: the leaves are ſmall, of a roundiſh figure, with an obtuſe point: on the tops of the branches come forth cluſters of imperfect flowers, followed each by a flattiſh ſeed. It is annual, grows wild about dunghills, and flowers in Auguſt.

THIS plant has a moderately ſtrong ſmell, not a little offenſive, ſomewhat akin to that of ſalt-fiſh, and which laſts long on the hands after touching the herb: it is ſometimes met with among old rubbiſh; in which ſituation, its ſmell proves weaker than when produced in moiſter places, which it naturally delights in, and is alſo ſomewhat of a different kind: in either caſe, its taſte is not very conſiderable. It gives a ſtrong impregnation to water, both by infuſion and diſtillation: the ſmell is extracted likewiſe by rectified ſpirit, and by this menſtruum in ſome degree covered. In drying, the ſmell becomes weaker and of a leſs offenſive kind: in keeping it is diſſipated, but not ſoon.

Stinking arach, on account of its ſtrong ſcent, is reckoned an uſeful antihyſteric; in which intention ſome recommend a conſerve of the leaves, others a watery infuſion, and others a ſpirituous tincture of them. On ſome occaſions, it may perhaps be preferable to the fetids which have been more commonly made uſe of; as not being accompanied with any pungency or irritation, and ſeeming to act merely by virtue of its odorous principle.

AURANTIA.

AURANTIA & arantia malus. Citrus Aurantia Linn. ORANGE TREE: a beautiful evergreen tree or ſhrub; with numerous, flexible, ſomewhat prickly branches; ſmooth, firm, broad leaves, having each two heart-like appendages on the pedicle; pentapetalous white flowers, ſet thick together among the leaves; and a large round yellow fruit, divided internally into eight cells, filled with a juicy pulp and whitiſh ſeeds. It is a native of the warmer climates, and ſcarcely bears the winters of ours without artificial ſhelter.

1. AURANTIA HISPALENSIS, *malus aurantia fructu acido Pharm. Lond. Aurantium hiſpalenſe Pharm. Edinb. Malus aurantia major C. B.* SEVILLE ORANGE: with dark yellow warty fruit, containing an acid juice.

THE flowers of this tree are highly odoriferous; and, on account of their fine ſmell, have been uſed in perfumes, and as a flavouring ingredient in medicinal compoſitions: their taſte is ſlightly bitteriſh. They communicate their ſmell and taſte both to water and rectified ſpirit, moſt perfectly to the latter: the watery infuſion is of a browniſh, the ſpirituous of a yellow colour. In diſtillation with water, they impregnate the aqueous fluid ſtrongly with their agreeable odour, and yield a ſmall quantity of a fragrant eſſential oil: the diſtilled water and oil, the preparations principally made uſe of, are generally brought to us from Italy and France, being rarely prepared in this country on account of the ſcarcity of the flowers. The watery decoction, inſpiſſated, yields an extract unpleaſantly bitteriſh: an extract made by rectified ſpirit retains, along with the bitteriſh matter, a moderate ſhare of the fine flavour of the flowers.

Aq. naphæ *Phar. Pariſ.*

Ol. ſeu eſſentia Neroli.

THE leaves alſo have a pleaſant though weak ſmell, and a bitteriſh taſte. Viewed againſt the light, they exhibit numerous tranſparent ſpecks, which appear to be little veſicles filled with eſſential oil. In diſtillation with water, a ſmall portion of oil ſeparates, of an agreeable flavour, but leſs ſo than that of the flowers.

The yellow rind of the fruit, carefully freed from the fungous white matter underneath, is a grateful warm aromatic bitter, of frequent uſe as a ſtomachic and corroborant, and for giving an agreeable flavour to other medicines. It is warmer than the peel of lemons, of a more durable flavour, and abounds more with a light fragrant eſſential oil; which is lodged in diſtinct cells on the ſurface of the peel, and exudes upon wounding it. It may be made into a conſerve by beating it into a pulp with triple the weight of double refined ſugar.

Conſerva aurantiorum *Ph. Edinb.*

Infuſed in boiling water, it gives out nearly the whole of its ſmell and taſte, together with a bright yellow tincture: eight ounces of the freſh rind give a ſtrong impregnation to four pints of water; and by diſſolving in this infuſion a proper quantity of ſugar, an agreeable ſyrup is prepared in the ſhops. Cold water, on the other hand, extracts chiefly the bitter matter, leaving the aromatic behind: hence when the freſh peel is ſteeped by the confectioners, for making a ſweetmeat, till it has loſt its bitterneſs, it ſtill retains a great ſhare of its peculiar flavour: when large quantities are macerated, a portion of oil is found floating on the ſurface, from ſome of the cells having been diſtended and burſt by the aqueous fluid.

Syrup. e cort. aurantiorum. *Ph. Lond. & Edinb.*

In diſtillation with water, the eſſential oil, in which the flavour of the peel reſides, totally ariſes, leaving only the bitter matter behind in the decoction. Both the oil and diſtilled water are very grateful: a ſpirituous water, moderately impregnated with the flavour of the orange peel, by diſtilling a gallon of proof ſpirit from ſix ounces of the dry rind, is an elegant cordial: and a ſimple water, more lightly flavoured with it, by drawing over a gallon of water from four ounces of the dry peel, is an uſeful diluent in fevers, and other diſeaſes, where the ſtomach and palate are apt to receive quick diſguſt.

Aq. cortic. aurant. ſpirituoſa *Ph. Lond.*
Aq. cortic. aurant. ſimp. *Ph. Lond.*

Rectified ſpirit of wine, digeſted on orange peel, extracts its virtues more perfectly than water, and receives from it a like yellow tincture: after the action of the ſpirit, the peel remains criſp, after water tough. The ſpirit, drawn off by diſtillation, taſtes conſiderably of the peel, but diſcovers little or nothing of its ſmell: the remaining extract contains, along with its bitterneſs, great part of its aromatic flavour, but is leſs agreeable than the rind in ſubſtance.

The juice of oranges is a grateful acid, of great uſe in inflammatory and putrid diſorders both acute and chronical. Its acid matter differs in ſome of its pharmaceutical properties, both from the fermented acid of vinegar, and from the native acid ſalts of the leaves of plants, at leaſt of ſuch as have been examined;—from the former, in its not being volatile, or not exhaling upon inſpiſſating the juice, nor riſing in diſtillation with the heat of boiling water;—from the latter, in its being ſoluble in ſpirit of wine; the inſpiſſated juice, at leaſt all its ſaline matter, diſſolving readily in this menſtruum as well as in water, and liquefying alſo in the air. Theſe properties afford commodious means of preſerving the acidity of the orange for many years; either in the form of a thick extract, or of a more dilute ſpirituous ſolution. The inſpiſſation of the juice muſt be performed with a very gentle heat, eſpecially towards the end of the proceſs, when the matter begins to grow thick, as it is then not only liable to contract an empyreuma, but at the ſame time to have great part of its acidity deſtroyed.

THE young unripe fruit, commonly called Curaſſoa apples, (*Aurantia curaſlaventia Pharm. Edinb. Aurantia enaſcentia & immatura Pharm. Pariſ.*) is a grateful aromatic bitter, of a flavour different from that of the peel of the ripe fruit, and without acidity; when freſh, it has a little tartneſs, which in drying is in great meaſure loſt. It readily gives out to rectified ſpirit the whole of its bitterneſs and flavour, together with a fine green tincture: water extracts its virtue leſs perfectly. Diſtilled with water, it yields a conſiderable quantity of yellow eſſential oil, of an agreeable and very fragrant ſmell. The ſpirit, diſtilled from the ſpirituous tincture, brings over likewiſe ſome ſhare of its flavour, leaving however the greateſt part concentrated in the extract, which proves an elegant, mild, aromatic bitter.

2. AURANTIA SINENSIS. *Aurantia dulcis. Aurantium dulci medulla vulgare Ferrant. heſperid. & Pharm. Pariſ.* CHINA or SWEET ORANGE: with bright yellow ſmooth fruit, containing a ſweet juice.

The rind of this kind of orange has a weak ſmell, and very little bitterneſs; and is ſcarcely ever employed for any medicinal uſe. The juice, of a grateful ſubacid ſweetneſs, agrees, in its general qualities, with the *fructus horæi* of our own climate; and like them, if taken immoderately, produces gripes and fluxes. It is a uſeful refrigerant in inflammatory diſpoſitions, and an excellent antiſeptic in ſcorbutic and other putrid diſorders.

AURUM.

AURUM vel Sol Pharm. Pariſ. GOLD: a yellow metal, extremely ductile; above nineteen times heavier than water; fuſible in a low white heat; fixt and indeſtructible in the fire; not ſoluble by any of the ſimple acids, in the common ways of making ſolutions; eaſily diſſolving in a mixture of the nitrous and marine acids, called *aqua regis*, into a yellow liquor which ſtains the ſkin purple.

Eſſential oils, ſhaken with this ſolution, imbibe the gold from the acid, and carrying it up to the ſurface, keep it there for a time diſſolved; but gradually throw it off again, on ſtanding for ſome hours, in form of bright yellow films, to the ſides of the glaſs. The ether or *ſpiritus vini æthereus* takes up the gold more readily and completely, and keeps it permanently diſſolved. Rectified ſpirit of wine mingles uniformly with the acid ſolution; but on ſtanding for ſome days, the gold ſeparates from the mixture, and riſes in films to the ſurface. A piece of tin, placed in the ſolution largely diluted with water, changes it red or purple, and throws down a precipitate of the ſame colour. By the appearances reſulting from theſe additions, very minute portions of gold, diſſolved in acid liquors, may with certainty be diſcovered.

This metal is found chiefly native: in ſmall granules or filaments; intermingled among earths, or bedded in ſtones; in the mines of the Spaniſh Weſt-Indies, among the ſands of ſome of the African coaſts and of ſome European rivers, and blended with the ores of ſome other metals. According to the nature of theſe admixtures, and their degree of union with the gold, the extraction of the metal is differently effected; by ablution with water; by amalgamation with mercury; by bringing the whole matter, that contains the gold, into fuſion by fire, with the addition of proper fluxes.

GOLD was introduced into medicine by the Arabians, and held to be one of the greateſt cordials and comforters of the nerves. As it apparently can have no medicinal effect in its groſs ſtate, not being diſſoluble by any fluid that can exiſt in the bodies of animals; the chemiſts have attempted to ſubtilize and reſolve it, and to extract what they called an anima or ſulphur from it. But as no means have been diſcovered of ſeparating the component parts of this metal, their tinctures and *aurum potabiles* either contained none of the gold, or were no other than diluted ſolutions of its whole ſubſtance. That the *aurum potabile* of the faculty of Paris, reckoned one of the beſt of the preparations of this kind, (made by ſhaking ſome oil of roſemary with a ſolution of gold in aqua regis, and afterwards digeſting the oil for a month in rectified ſpirit of wine) retains none of the gold, is obvious from the characters of this metal above laid down.

Tinct. auri ſeu aurum potabile *Ph. Pariſ.*

Solutions of gold in aqua regis are corroſive: ſo far diluted, as that they can be taken with ſafety, they are, according to Hoffman, purgative: the dry matter left upon inſpiſſating them, is a ſtrong cauſtic. The purple precipitate, made by adding pure tin to the ſolution, is ſaid to be diaphoretic: a precipitate made by alkalies is ſtrongly purgative and emetic. This laſt precipitate waſhed from the adhering ſaline matter by repeated affuſions of water, purges more moderately, though rarely without gripes, and ſometimes operates by ſweat: it has been given, from half a grain to five or ſix grains, in fevers, and in convulſive and other diſorders ariſing from, or ſupported by, crudities in the firſt paſſages: but as its operation is extremely variable, as it has often produced dangerous ſymptoms,(a) and as its beſt effects are no other than what may be obtained from medicines of known ſafety, it is now, in this country, entirely in diſuſe; being regarded only as a matter of curioſity, on account of its property of exploding violently when heated or ſtrongly rubbed.*(b)

Aurum fulminans *Ph. Pariſ.*

Some have amalgamated gold with pure quickſilver, and ſet the compound to calcine, as directed in page 103 for the calcination of mercury by itſelf, till it was converted into a red powder: others have melted the gold with twice its weight or more of martial regulus of antimony, and expoſed the powdered mixture, in a glaſs veſſel, to a moderate heat, till the powder became purple. That theſe kinds of preparations have very conſiderable medicinal virtues, is not to be queſtioned; but that thoſe virtues have any dependence upon the gold, is ſcarcely to be preſumed: all that can be rationally expected from this ingredient, is, to obtund the activity of the mercurial calx, and of the not fully calcined antimonial metal. When gold is thus divided by the admixture of other metallic bodies, and in ſome degree calcined along with them, it proves diſſoluble in one of the mineral acids which would not touch it before, to wit, ſpirit of ſalt; but the acids of the vegetable and the animal kingdom, it ſtill reſiſts as permanently as fine gold in the maſs.

(a) Ludovici, *Pharm. moderno ſeculo applicanda, diſſ.* i. *oper. p.* 102. Stahl, *Digram. de pro-exeucriſeos dignitate, ſect.* viii. Hoffman, *Philoſophia corp. human. morbos. par.* ii. *cap.* viii. §. 13.

*(b) *Aurum fulminans* is ſtill in uſe in Germany. A late writer (*M. A. Plenciz*) recommends it in every caſe where a ſure and ſafe laxative is wanted; alledging that it does not act with the violence many practitioners have aſſerted.

BALAUSTIA.

BALAUSTIA Pharm. Lond. & Edinb. Balaustines: large roſe-like flowers, of a deep red colour, ſet in long bell-ſhaped tough cups. They are the produce of the wild or double-flowered pomegranate tree, *(Granata malus Pharm. Edinb. Balauſtia flore pleno majore C. B. Punica Granatum Linn.)* a low prickly tree or ſhrub, with long narrow leaves, bearing a browniſh acerb fruit about the ſize of an orange; a native of the ſouthern parts of Europe, and cultivated in ſome of our gardens on account of the beauty and continuance of its flowers. The ſhops are uſually ſupplied with the dried flowers from abroad; thoſe of our own growth do not appear to be anywiſe inferiour to the foreign, but are not to be procured in ſufficient quantity.

Balaustine flowers are mildly aſtringent and corroborant; of a moderately rough and ſomewhat bitteriſh taſte, and of little or no ſmell, or particular flavour. They give out their aſtringent matter, together with a pale red colour, both to water and rectified ſpirit: *(a) the extracts, obtained by inſpiſſating the tinctures, in which the active parts of the flower are concentrated, are pretty ſtrongly ſtyptic. The ſpirituous tincture is of a paler colour, and the extract in leſs quantity and proportionably ſtronger in taſte, than the tincture and extract made with water. The ſpirituous extract, as well as the watery infuſion, ſtrikes an inky blackneſs with ſolution of chalybeate vitriol; a proof, that the aſtringent matter of the balauſtine, after its ſeparation from greateſt part of the mucilaginous and other groſſer ſubſtances of the flower, is ſtill diſſoluble in water.

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*(a) Scarce at all to ſpirit. *Cullen.*

BALSAMITA.

BALSAMITA: a perennial plant, with undivided indented leaves, and yellow naked diſcous flowers ſet in form of umbels on the tops of the ſtalks; a native of the ſouthern parts of Europe, and cultivated in our gardens.

1. BALSAMITA MAS. *Coſtus hortenſis vel tanacetum hortenſe Pharm. Pariſ. Mentha ſaracenica Officinarum Germaniæ. Mentha hortenſis corymbifera C. B. Tanacetum Balſamita Linn.* Coſtmary or alecoſt; with oval leaves.

2. AGERATUM, *Balſamita femina, Coſtus hortorum minor, Eupatorium meſues, Herba julia, Mentha corymbifera minor. Ageratum foliis ſerratis C. B. Achillæa Ageratum Linn.* Maudlin; with numerous, ſmall, oblong, narrow leaves.

THESE herbs have been uſed as mild corroborants and aperients, in weakneſſes of the ſtomach, obſtructions of the viſcera, and cachectic indiſpoſitions; and though at preſent diſregarded, they promiſe, from their ſenſible qualities, to be medicines of ſome utility.

They have a moderately ſtrong pleaſant ſmell, ſomewhat approaching to that of mint, and a weakly aromatic bitteriſh taſte: the two ſorts differ a little in flavour and in taſte from one another, the firſt having the moſt of the mint ſmell, and likewiſe the greateſt bitteriſhneſs. Infuſions of them in water ſmell pretty ſtrongly, and taſte ſlightly, of the herbs: in the tinctures made with rectified ſpirit, which are of a deep green colour, the ſmell is in good meaſure covered by the menſtruum. In diſtillation with water, they yield a ſmall quantity of eſſential oil, of a pungent taſte, and which ſmells ſtrongly and agreeably of the balſamitæ; that of the ſecond ſpecies is the moſt grateful: the remaining decoction, thus deprived of the aromatic matter, is unpleaſantly, though but weakly, rough, bitter, and ſubſaline. They give over a part of their flavour alſo in diſtillation with rectified ſpirit, particularly the ſecond ſpecies, whoſe odorous matter appears to be of a more volatile kind than that of the firſt: the extracts, obtained by inſpiſſating the ſpirituous tinctures, are moderately, and not diſagreeably, warm and bitteriſh.

BALSAMUM COPAIBA.

BALSAMUM COPAIVA Pharm. Lond. Balſamum copaibæ Pharm. Edinb. Balſamum braſilienſe. BALSAM OF COPAIBA or CAPIVI: a liquid reſinous juice, obtained from a large tree of the ſame name, *(Copaiba brazilienſibus Marcg. Arbor balſamifera brazilienſis fructu monoſpermo Raii hiſt. Copaifera officinalis Linn.)* which grows ſpontaneouſly in the woods of Brazil, and has been lately introduced into ſome of the Britiſh American iſlands. The balſam is extracted by making deep inciſions in the trunk of the tree, in the middle of the ſummer heats: if no juice flows, the wounds are for a time cloſed up. It is ſaid, that at the proper ſeaſon, ſeveral pounds of balſam iſſue in an hour or two; that one tree yields in all five or ſix gallons; but that after once bleeding, it never affords more.

The juice, as it iſſues from the tree, is limpid and colourleſs, like the diſtilled oil of turpentine. As brought to us, it is uſually of a pale yellowiſh hue, and about the conſiſtence of oil olive or a little thicker: by long keeping, it grows nearly as thick as honey, but has not been obſerved, like moſt of the other reſinous juices, to grow ſolid or dry. In all its ſtates of conſiſtency, it continues clear and tranſparent.

We ſometimes find in the ſhops, under the name of copaiba, a thick, whitiſh, almoſt opake balſam, with a quantity of turbid watery liquor at the bottom. This ſort, probably, is either adulterated by the mixture of other ſubſtances, or has been extracted, by boiling in water, from the bark or branches of the tree. It is much leſs grateful than the genuine balſam.

BALSAM of copaiba has a moderately agreeable ſmell, and a bitteriſh biting taſte, not very intenſe, but durable in the mouth. It has been employed principally, and preferably to the other balſams, in gleets, the fluor albus, and in ulcerations of the urinary paſſages and the lungs. Fuller ſays, he has known dry deep coughs, coughing up of blood and pus, voiding of chyle inſtead of urine, with great pains and weakneſs, cured by it; and that, notwithſtanding the manifeſt warmth and bitterneſs of its taſte, he has found it to agree in hectic caſes: he obſerves that it gives the urine a bitter taſte, but not a violet ſmell as the turpentines do, and that if taken in doſes of two or three drams, it proves like them, purgative. The uſual doſe is from ten to thirty or forty drops.*(a)

This balſam, agitated with water, in ſome degree unites with it, and renders the liquor turbid and milky, but ſoon ſeparates and riſes to the ſurface on ſtanding. Dropt on ſugar, or triturated with thick mucilages, or with whites or yolks of eggs, it becomes more permanently miſcible with water into an uniform milky liquid: it is generally taken either in this form, or mixed with powdery and other matters into a bolus or electary. It mingles with oils, eaſily with the diſtilled, more difficultly with the groſs ones obtained by expreſſion. It diſſolves in rectified ſpirit of wine into a tranſparent liquor, of a fragrant ſmell, more agreeable than that of the balſam itſelf.

Diſtilled with water, it yields nearly half its weight of an eſſential oil, which when newly drawn is limpid, but by age grows yellowiſh: the part of the balſam, which remains behind in the ſtill, is a tenacious inodorous reſin, of a yellowiſh colour inclining to green. The reſin diſſolves in rectified ſpirit more eaſily than the entire balſam; the oil more difficultly, requiring, as Hoffman obſerves, near four times its weight of the menſtruum, whereas the balſam will diſſolve in twice its weight or leſs.

The balſam, diſtilled in a retort, without addition, by a fire gradually raiſed, gives over firſt a light yellow oil, ſmelling conſiderably of the juice; then a darker coloured oil, and afterwards a fine blue one, both which are of a very pungent taſte, and have little other than an empyreumatic flavour, though not of a very ungrateful kind. In the ſhops is kept an empyreumatic oil, drawn from a mixture of a quart of the balſam with four ounces of gum guaiacum.

Ol. copaivæ comp. *Phar. Londinenſ.*

BALSAMUM PERUVIANUM.

BALSAMUM PERUVIANUM, indicum, mexicanum, americanum. BALSAM OF PERU: a reſinous juice, obtained from certain odoriferous trees (*Cabureiba Piſon. Hoitziloxitl ſeu arbor balſami indici Hernand.*) growing in Peru and the warmer parts of America.

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*(a) For a cenſure of this practice, and of the uſe of the other balſams and reſins in conſumptive caſes, ſee a paper of Dr. Fothergill's in Vol. IV. of the *Lond. Med. Obſerv. and Inq.*

1. Balsamum peruvianum *Pharm. Lond. & Edinb. Balſamum peruvianum nigrum, fuſcum, vulgare.* Common balſam of Peru; uſually about the conſiſtence of thin honey, and of a dark opake reddiſh brown colour inclining to black. It is ſaid to be extracted by boiling the tops and bark of the tree in water, and to be found floating on the ſurface when the liquor cools *(a)*. The balſam, however, as brought to us, dropt into cold water, does not float, but ſinks immediately to the bottom: if a drop be let fall into water almoſt boiling hot, it ſeparates into two parts, an oily cuticle, of a very penetrating taſte, which ſpreads upon the ſurface, and a groſſer matter, in larger quantity, which ſinks. It may be preſumed therefore, that the balſam is extracted by ſome other method than that above pointed out.

This balſam does not in any degree unite with water, or render it milky or turbid, by agitation. It becomes miſcible with water, like that of copaiba, by the intervention of mucilage or yolk of eggs, but not perfectly by ſugar: when united with ſugar in a dry form, or with thick ſolutions of it, great part of the balſam ſeparates and ſubſides on diluting the mixture with water. It diſſolves in rectified ſpirit of wine, a ſmall quantity of impure matter commonly remaining: and likewiſe, by the aſſiſtance of a boiling heat, in alkaline lixivia *(b)*. It unites readily with diſtilled oils; but not at all with expreſſed oils or with fluid animal fats, a circumſtance in which it differs remarkably from all the other reſinous juices that have been examined: after it has been blended, by trituration, with conſiſtent unctuous matters, and with wax, it ſeparates and falls to the bottom as ſoon as the mixture is made fluid by heat. Nor does it mingle very perfectly with the vegetable juices of its own kind, the native balſams and turpentines.

Diſtilled with water, it yields about one ſixteenth its weight of eſſential oil, of a reddiſh colour, a fragrant ſmell, and a very pungent taſte: this oil is remarkably difficult of ſolution in ſpirit of wine, requiring, according to Hoffman's experiments, no leſs than twelve times its own weight of the ſpirit. The balſam, diſtilled in a retort, without addition, yields a larger quantity of a yellowiſh red empyreumatic oil, and commonly, as Neumann obſerves, a ſmall portion of ſaline matter ſimilar to flowers of benzoine.

(a) Monardes, *apud Cluſium, exoticorum, lib.* x.

(b) Hoffman, *Diſſ. de balſamo Peruviano, cap.* ii. 11 & 23.

This juice has an agreeable aromatic ſmell, and a very hot pungent taſte. It is one of the hotteſt of the natural balſams, and hence preferred, in cold phlegmatic diſpoſitions, for warming the habit, and ſtrengthening the nervous as well as the vaſcular ſyſtem. The doſe is from two or three grains to ten or twelve. It is uſed alſo, in preference to the other balſams, externally, for wounds and ulcers: Van Swieten obſerves, that for preventing or abating the terrible ſymptoms ariſing from punctures of the nerves or tendons, one of the beſt remedies is balſam of Peru, dropt warm into the wound, and made to ſpread and penetrate by applying a warm ſpatula *(a)*.

2. BALSAMUM PERUVIANUM ALBUM *ſeu Styrax alba Ph. Pariſ.* White balſam of Peru, or white ſtorax; brought over in gourd ſhells; of a pale yellowiſh colour, thick and tenacious, becoming by age ſolid and brittle. It is ſuppoſed to be the produce of the ſame trees which afford the common or black balſam, and to exude from inciſions made in their trunks.

This balſam is in taſte leſs hot and pungent than the foregoing, in ſmell more fragrant and agreeable, ſomewhat approaching to that of ſtorax. It readily diſſolves in rectified ſpirit, and unites with oils both expreſſed and diſtilled, as alſo with animal fats. Dropt, in its fluid ſtate, into warm water, it ſpreads totally upon the ſurface, and forms a pellicle coheſive enough to be taken off entire *(b)*, one of the principal criteria by which the precious balſam of Gilead has been diſtinguiſhed. It is rarely met with in the ſhops.

BALSAMUM TOLUTANUM.

BALSAMUM TOLUTANUM Pharm. Lond. & Edinb. BALSAM OF TOLU: a reſinous juice; flowing from inciſions made in the trunk of a tree ſaid to reſemble the pine, *(Toluifera Balſamum Linn.)* growing in the province of Tolu in the Spaniſh Weſt Indies *(c)*, from whence the

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(a) Comment. in Boerh. aphoriſmos, §. 164. *vol.* i. *p.* 242.

(b) Bartholin, *Diſſ. de theriaca,* ii. 26.

(c) Monardes, *apud Cluſium, exoticorum, lib.* x.

the balſam is brought to us in little gourd ſhells. It is of a yellowiſh brown colour inclining to red, in conſiſtence uſually thick and tenacious: by age it grows hard and brittle, without ſuffering any great loſs of its odoriferous parts.

This balſam has an extremely fragrant ſmell, ſomewhat reſembling that of lemons; and an agreeable, warm, ſweetiſh taſte, very ſlightly pungent, and not accompanied, like that of moſt of the other balſams, with any nauſeous reliſh. It poſſeſſes the ſame general virtues with thoſe of Peru and copaiba, differing only in being milder, leſs hot or irritating, and more grateful to the ſtomach as well as the palate.

Boiled in water for two or three hours, in a circulatory veſſel, or in a matras with a very long neck or having a long tube inſerted into its mouth, ſo as to prevent evaporation, it communicates to the liquor great part of its fragrance: eight ounces of the balſam give a ſtrong impregnation to three pints of water: the decoction ſtrained off from the undiſſolved reſin, forms, with a proper quantity of ſugar, an elegant balſamic ſyrup. The balſam diſſolves totally in rectified ſpirit of wine, and in this form may be mixed in ſubſtance with ſyrups, ſo as to impregnate a much larger quantity of them with its fine flavour: forty-five grains of the balſam, diſſolved in an ounce of pure ſpirit, are ſufficient for two pounds of a ſimple flavourleſs ſyrup made from ſugar and water: the ſolution is to be ſtirred gradually into the ſyrup juſt warm from the fire, and the mixture kept in the gentle heat of a water bath till the ſpirit has exhaled. This balſam may likewiſe be diſſolved in water, into a milky liquor, by trituration with gums or mucilages. It unites readily with diſtilled oils, more difficultly with expreſſed oils and with fats.

Syrup. balſamic. *Ph. Lond.*

Tinct. tolutana *Pharm. Edinb.*

Syrup. balſamic. *Ph. Edinb.*

In diſtillation with water, it impregnates the liquor ſtrongly with its fragance; and this, perhaps, is the moſt advantageous method of obtaining its ſimple odoriferous matter in the form of a watery ſolution: if the quantity of balſam, ſubmitted to the diſtillation, be large, a ſmall proportion of a very fragrant eſſential oil may be collected. Diſtilled in a retort, without addition, it yields a pale and a dark coloured empyreumatic oil, and ſometimes a ſmall quantity of a kind of ſaline matter, of the ſame nature with flowers of benzoine.

BAMIA.

BAMIA MOSCHATA Pharm. Pariſ. Ab-el-moſch, i. e. granum moſchi. Semen ketmiæ ægyptiacæ. MUSK-SEED: flat, kidney-ſhaped ſtriated ſeeds, about the ſize of a large pin's head, of a greyiſh or browniſh colour on the outſide, and white within: produced by a ſhrubby plant, of the mallow kind, *alcea ægyptiaca villoſa C. B. Hibiſcus Abelmoſchus Linn.* a native of Egypt, and of the Eaſt and Weſt Indies.

THESE ſeeds have a fragrant ſmell, approaching to that of muſk, and a ſlight aromatic bitteriſh taſte. They are uſed in perfumes, and ſeem to have a claim, as medicines, to the cordial and nervine virtues experienced from moſt of the other ſubſtances of that claſs. They are ranked in France among the officinals, but are rarely to be met with among us.

BARDANA.

BARDANA MAJOR, Lappa major, Pharm. Edinb. Lappa major, arcium dioſcoridis C. B. Perſonata ſive lappa major aut bardana J. B. Arctium Lappa Linn. BURDOCK: a biennial plant, common by road ſides, ſufficiently known by its ſcaly heads or burs; the leaves are very large, ſhaped ſomewhat like a heart, of a deep green colour above and whitiſh underneath: the ſeeds flatted, nearly oval, ſomewhat crooked, ſlightly ſtriated, of a dark brown or blackiſh colour: the root large, ſtraight, browniſh on the outſide and white within, compoſed of a thick cortical part, and a ſpongy medullary ſubſtance, with more or leſs of a woody ſeptum between them.

THE roots of burdock have very little ſmell, and a weak taſte, chiefly ſweetiſh, mixed as it were with a ſlight bitteriſhneſs and roughneſs. Boiled in water, they impart a browniſh colour, and a ſoft vapid kind of taſte: extracts made from them, both by water and by rectified ſpirit, are weakly ſweetiſh, bitteriſh, ſubaſtringent, and ſubſaline. Theſe roots are recommended as mild diuretics, diaphoretics, and ſweeteners, in ſcorbutic, rheumatic, gouty, and venereal diſorders; and are ſuppoſed to be of ſimilar virtue to china and ſarſaparilla; to which, in their ſenſible qualities, they have a conſiderable reſemblance. They are uſed chiefly,

Decoctum bardanæ *Noſocom. Ed.*

chiefly, and to the beſt advantage, in the form of decoction: two ounces of the dried root are boiled in three pints of water, till one pint is waſted, and a pint or more of the ſtrained liquor taken warm every day.

The expreſſed juice of the leaves has been ſometimes given, to the quantity of a quarter of a pint or more, in the ſame intentions. The leaves are bitter and more ſaline than the roots, and have nothing of their ſweetiſhneſs: the juice, depurated, and inſpiſſated to the conſiſtence of an extract, diſcovers a moderately ſtrong penetrating, ſaline bitterneſs.

The ſeeds alſo are bitteriſh and ſlightly aromatic; and have been given, in doſes of a dram, as a diuretic, and as an aperient in diſorders of the breaſt. They are ſaid to be purgative. A good deal of care is requiſite, to clear them thoroughly from the prickly matter with which they are covered, and which, if ſwallowed, immediately diſcovers how much it offends the parts it paſſes through, by the uneaſy ſenſations it produces in the throat(a).

BDELLIUM.

BDELLIUM Pharm. Edinb.(b) BDELLIUM: a gummy-reſinous juice; the produce of an oriental tree, of which we have no particular deſcription; brought from Arabia and the Eaſt Indies, in pieces of different magnitudes and figures, externally of a dark reddiſh brown colour not unlike myrrh, internally clear and ſomewhat reſembling glue.

THIS gummy-reſin has a moderately agreeable ſmell, and a bitteriſh ſlightly pungent taſte. It grows ſoft and tenacious in the mouth, and ſticks to the teeth. Laid on a red-hot iron, it readily catches flame, and burns with a crackling noiſe; during which, little ſtreams of liquid matter ooze out at the ſurface. Both water and rectified ſpirit diſſolve, each, near one half of the bdellium: the ſpirituous tincture, of a tranſparent reddiſh yellow or orange colour, taſtes ſtronger and ſmells more agreeably of the bdellium, than the watery infuſion, which is turbid and browniſh. Geoffroy relates, that its whole ſubſtance is diſſolved by wine, vinegar, tartarized ſpirit of wine, and alkaline liquors: the active matter of the bdellium is indeed extracted by all theſe menſtrua, but the three firſt were found upon trial to leave a conſiderable part of its ſubſtance undiſſolved: proof ſpirit took up nearly the whole. In diſtillation with water, it impregnates the aqueous fluid weakly with its flavour; nor is there any appearance of eſſential oil, at leaſt when only ſmall quantities, as three or four ounces, are ſubmitted to the operation. The diſtilled ſpirit has very little flavour of the bdellium; nevertheleſs, the ſpirituous extract proves weaker, both in ſmell and taſte, than the juice in ſubſtance, its active parts being probably enveloped, in this preparation, by the tenacious reſin.

(a) Boerhaave, *Hiſt. plant. hort. Lugd. Bat.* p. 205.

(b) Expunged.

This gummy-reſin ſtands recommended, as a corroborant and attenuant, in diſorders of the breaſt, for promoting urine and the menſes; and externally for reſolving or maturating hard tumours. It appears to be one of the weakeſt of the deobſtruent gums, and is at preſent rarely made uſe of.

BECABUNGA.

BECABUNGA Pharm. Lond. Anagallis aquatica minor folio ſubrotundo C. B. Veronica aquatica folio ſubrotundo Moriſon. hiſt. Veronica Becabunga Linn. BROOKLIME OR WATER PIMPERNEL: a low creeping plant; with round thick ſmooth reddiſh ſtalks, naked and procumbent at bottom, erect at top, and clothed with roundiſh firm juicy leaves, of a dark ſhining green colour, ſlightly indented about the edges, ſet in pairs at the joints: from the boſoms of the leaves ariſe naked footſtalks, bearing ſpikes of blue flowers which are deeply cut into four ſegments and followed by flattiſh ſeed-veſſels. It is common in rivulets and ditches, and flowers in June: the leaves remain all the winter, but are in greateſt perfection in the ſpring.

THIS herb is ranked among the antiſcorbutics, and ſuppoſed to poſſeſs, in ſome degree, the virtues of the *cochlearia* and *naſturtium.* It is chiefly employed in conjunction with theſe and the other acrid antiſcorbutic herbs, to which it appears to be an uſeful addition, though not entirely ſimilar to them in quality. It has nothing of the ſubtile volatile ſmell of the plants of the ſcurvygraſs kind, and diſcovers hardly any pungency to the taſte; what taſte it has being rather ſubſaline and bitteriſh than acrid.

BELLIS MAJOR.

BELLIS MAJOR Pharm. Edinb.(a) *Bupthalmum majus; Leucanthemum vulgare; Conſolida media; Oculus bovis. Bellis ſylveſtris caule folioſo major C. B. Chryſanthemum Leucanthemum Linn.* GREATER or OXEYE DAISY; a plant with oblong narrow deeply indented leaves, joined cloſe to the ſtalks, which are pentagonal, hairy, branched, and bear on the tops pretty large ſolitary flowers compoſed of white petala ſet round a yellow diſk. It is perennial, grows wild in corn fields and dry paſture grounds, and flowers in May and June.

THE leaves of this plant have been recommended in diſorders of the breaſt, both aſthmatical and phthiſical, and as diuretics. Geoffroy relates, that the herb, gathered before the flowers have come forth, and boiled in water, imparts an acrid taſte, penetrating and ſubtile like pepper; and that this decoction is an excellent diuretic and vulnerary. Either this experiment was made, not with the *bellis major*, but with the *bellis minor*; or elſe the herb loſes its pungency when the flowers appear: the *bellis minor* is manifeſtly acrid, but in the *major*, when in flower, no acrimony could be obſerved: the leaves, whilſt freſh, ſeemed little other than herbaceous; when dried, they diſcovered to the palate a not ungrateful mucilaginous ſweetneſs.

BELLIS MINOR.

BELLIS MINOR, Conſolida minima, Pharm. Edinb.(b) *Bellis ſylveſtris minor C. B. Bellis perennis Linn.* COMMON DAISY: a low ſomewhat hairy plant, with oblong leaves lying on the ground, widening from the root to the extremity, which is rounded: among theſe ariſe round ſlender naked pedicles, bearing ſolitary flowers compoſed of white or purpliſh petala ſet round a yellow diſk. It is perennial, common almoſt every where, and flowers early in the ſpring.

THIS plant ſtands recommended as a vulnerary, detergent, and reſolvent; in diſeaſes of the breaſt, internal bruiſes, hypochondriacal complaints, and diſorders proceeding from the drinking of cold liquors when the body has been much heated. Schrœder informs us, that the leaves and flowers looſen the belly.

(a) Expunged.

(b) Expunged.

The leaves, which have been chiefly made uſe of, are in taſte ſlightly acrid. The roots are conſiderably ſtronger, of a ſubtile penetrating pungency, not hot or fiery, but ſomewhat of the contrayerva kind; and though at preſent diſregarded, promiſe to be a medicine of no ſmall virtue. Their pungent matter is not diſſipated in drying, is diſſolved both by water and ſpirit, and on inſpiſſating the ſolutions is left in great part behind, in the watery, as well as in the ſpirituous extract. No part of the plant has any remarkable ſmell.

BEN.

BEN, ſive Balanus myrepſica, Pharm. Pariſienſ. Behen. Glans unguentaria. BEN NUT: a whitiſh nut, about the ſize of a ſmall filberd, of a roundiſh triangular ſhape, including a kernel of the ſame figure covered with a white ſkin. It is the produce of a middle-ſized tree, ſaid to reſemble the birch, and to grow ſpontaneouſly in the Eaſt Indies and in America. It is the *Guilandina Moringa* of Linnæus; and the ſame the wood of which is called *Lignum Nephriticum.*

THESE kernels have a nauſeous oily bitter taſte; and when taken internally, are ſaid to diſorder the ſtomach, and occaſion purging, ſickneſs, and vomiting. On expreſſion, they yield about one fourth their weight of a yellowiſh oil, of ſcarcely any particular taſte or ſmell; the nauſeous bitter matter remaining behind, not ſoluble in oily menſtrua. This oil differs from moſt of the others of the expreſſed kind, in not being ſubject to grow rancid by long keeping; on account of which property, it is employed as a baſis for perfumes and odoriferous unguents. It coagulates in a ſlight degree of cold. It is impregnated with the fragrance of jaſmin and other flowers, by ſtratifying them with cotton dipt in the oil, and repeating the proceſs with freſh flowers, till the oil becomes ſufficiently odorous, after which it is ſqueezed out from the cotton in a preſs.

BENZOINUM.

BENZOINUM Pharm. Lond. & Edinb. Benjoinum; Benzoe; Aſa dulcis. BENZOINE or BENJAMIN: a concrete reſinous juice, obtained from a middle-ſized tree, *(Croton Bentzoë Linn.)* with undivided, ſomewhat oval leaves, pointed at both ends, not ribbed, falling off in the winter*(a)*; bearing flattiſh nuts, about the ſize of nutmegs, whoſe fleſhy covering is externally rough and hairy*(b)*. This tree is a native of the Eaſt Indies, where the benzoine is extracted by making deep inciſions in the upper part of the trunk, about the origin of the firſt branches: it is ſaid that one tree never yields above three pounds*(b)*. The juice exudes white, and concreting on the tree becomes yellowiſh, reddiſh, or browniſh; its colour turning darker, the longer it lies expoſed to the air. It is brought to us in large brittle maſſes, compoſed partly of white, partly of yellowiſh or light brown, and often alſo of darker coloured pieces: that which is cleareſt and contains the moſt white matter, called by authors *benzoe amygdaloides*, is accounted the beſt.

THIS reſin has very little taſte, impreſſing on the palate only a ſlight ſweetneſs: its ſmell, eſpecially when rubbed or heated, is extremely fragrant and agreeable. It totally diſſolves in rectified ſpirit of wine, the impurities excepted, which are generally in very ſmall quantity, into a deep yellowiſh red liquor; and in this ſtate diſcovers to the taſte a degree of warmth and pungency as well as ſweetneſs. It imparts, by digeſtion, to water alſo, a conſiderable ſhare of its fragrance, and a ſlight pungency: the filtered liquor, gently exhaled, leaves, not a reſinous or mucilaginous extract, but a cryſtalline matter, ſeemingly of a ſaline nature, amounting, as I have found on ſeveral trials, to one tenth or one eighth the weight of the benzoine.

Flores benzoini *Pharm. Lond. & Ed.*

Expoſed to a gentle heat, in a retort or other proper veſſel, it melts, and ſends up into the neck white ſhining flowers, ſimilar to the cryſtals obtained by water. Theſe are followed by a thin yellowiſh oil, ſlightly empyreumatic, intermingled with an acidulous liquor; and at length, by a thick butyraceous matter, which, liquefied in boiling water, gives out to it a little more cryſtalline matter, ſeparable by filtration and proper evaporation: the whole quantity of ſaline matter obtainable by this method is ſomewhat greater than that extracted by boiling the benzoine in water. The thin oil, rediſtilled with water, loſes its empyreumatic taint, and in this ſtate ſmells agreeably of the benzoine, and appears of the ſame nature with eſſential oils: the benzoine itſelf, diſtilled with water, has not been obſerved, like moſt of the other reſinous juices, to yield any eſſential oil.

(a) Linnæus, *Species plantarum*, i. 370.

(b) Grimm, *Act. nat. curioſ. dec.* ii. *ann.* 2. *obſ.* 152. Rumph. *Herbarium amboinenſe*.

The flowers or cryſtals of benzoine have a grateful ſaline taſte, and partake of the fragrance of the reſin. They diſſolve in ſpirit of wine; and, by the aſſiſtance of heat, in water; but from this laſt, they ſeparate again, in great part, as the liquor cools, ſhooting into ſaline ſpicula, which unite together into irregular maſſes: the addition of ſo much ſugar, as will reduce the water to the conſiſtence of a ſyrup, prevents their ſeparation, the flowers continuing ſuſpended in the ſyrup after it has grown cold. Diſtilled with water, they ariſe entire, concreting into their original form, without communicating any ſmell or taſte to the diſtilled liquor.

Theſe flowers, unleſs ſublimed with a very gentle heat, are apt to be tainted with an empyreumatic ſmell, and a yellow colour, on account of a little of the oil being forced up with them. From this they may be purified, by mixing them with ſome dry tobacco-pipe clay, and ſubliming them afreſh; or perhaps more perfectly, by ſolution in water, filtration, and cryſtallization. Though purified, however, to a ſnowy whiteneſs, they ſtill participate of oil, and hence prove inflammable in the fire, and are ſubject, in long keeping, to grow yellow again. They grow ſooner yellow in cloſe veſſels, than in open ones; the oil, in the latter caſe, being perhaps carried off by the air in proportion as it is extricated from the ſaline matter.

The principal uſe of this fragrant reſin is in perfumes, and as a coſmetic; for which laſt purpoſe, a ſolution of it in ſpirit of wine is mixed with ſo much water as is ſufficient to render it milky, as twenty times its quantity or more. It promiſes, however, to be applicable to other uſes, and to approach in virtue, as in fragrance, to ſtorax and balſam of Tolu. It is ſaid to be of great ſervice in diſorders of the breaſt, for reſolving obſtructions of the pulmonary veſſels, and promoting expectoration: in which intentions the flowers are ſometimes given, from three or four grains to fifteen. The white powder, precipitated by water from ſolutions of the benzoine in ſpirit, has been employed by ſome as ſimilar and ſuperiour to the flowers, but appears to be little other than the pure benzoine in ſubſtance: it is not the ſaline but the reſinous matter of

Lac virginis.

Magiſter. benzoini *Ph. Bran. &c.*

the benzoine, that is moſt diſpoſed to be precipitated from ſpirit by water. The flowers, ſnuffed up the noſe, are ſaid to be a powerful errhine.

BERBERIS.

BERBERIS ſeu Oxyacantha galeni, Pharm. Edinb.(a) Berberis dumetorum C. B. Berberis vulgaris Linn. Spina acida; Creſpinus. BARBERRY: a large prickly buſh, with brittle branches, covered with an aſh-coloured bark, under which lies another of a deep yellow; ſmall, ſmooth, ſomewhat oval, pale green leaves, finely ſerrated about the edges, and yellow monopetalous flowers, ſtanding in cluſters on the tops upon naked footſtalks, followed by oblong red berries, containing, each, generally two ſeeds: ſome of the individuals have no ſeeds in their berries, and ſometimes berries with and without ſeeds are found on one buſh. It grows wild on chalky hills in ſeveral parts of England, flowers in May, and ripens its fruit in September.

THE fruit of this ſhrub is a mild reſtringent acid, acceptable to the ſtomach, and of great medicinal efficacy in hot bilious diſorders and a colliquative or putrid diſpoſition of the humours. Proſper Alpinus informs us, that the Egyptians employ, in ardent and peſtilential fevers and in fluxes, a diluted juice of the berries, prepared by macerating them in about twelve times their quantity of water, for a day or a night, with the addition of a little fennel ſeed or a piece of bread, and then preſſing out and ſtraining the liquor, which is ſweetened with ſugar, or ſugar of roſes, or ſyrup of citrons, and given the patient plentifully to drink: he ſays he took this medicine himſelf, with happy ſucceſs, in a peſtilential fever, accompanied with an immoderate bilious diarrhœa *(b)*. Simon Paulli relates, that he was cured of a like diſeaſe, by the uſe of ſyrup of barberries diluted with water; and that a concrete ſalt, which he calls tartar, may be obtained from the juice, by mixing two pounds of it with two ounces of lemon juice, digeſting them together in a ſand-heat for two days, then gently evaporating the filtered liquor to one half, and ſetting it in a cellar for ſome days: the tartar, he ſays, incruſtates

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(a) Expunged.

(b) Alpinus, *De medicina Ægyptiorum, lib.* iv. *cap.* i.

the ſides and bottom of the glaſs, proves very grateful both to the palate and ſtomach, and reſiſts febrile heat and the corruption of the humours; from whence it may be preſumed to be the eſſential *acid* ſalt of the fruit; by further inſpiſſating the remaining juice, more of this ſaline ſubſtance ſeparates in the ſame manner. Among us, theſe berries are commonly made into a gelly, by boiling them with an equal weight of fine ſugar, over a gentle fire, to a due conſiſtence, and then ſtraining the fluid through a woollen cloth. By drying the berries, their acidity is abated, and their aſtringency improved.

The leaves of the barberry buſh have likewiſe a not ungrateful reſtringent acid taſte, and have ſometimes been employed in the ſame intentions as the fruit, as an ingredient in cooling ſalads. The inner yellow bark, in taſte auſtere and bitteriſh, is ſaid to be gently purgative, and to be ſerviceable in jaundices: Mr. Ray commends, in this diſeaſe, from his own experience, a decoction in ale or other liquors, or rather an infuſion in white wine, of the yellow bark both of the branches and the roots. It gives a deep yellow tincture both to watery and ſpirituous menſtrua.

BETA.

BETA Pharm. Edinb.(a) Beta vulgaris Linn. Beet: a plant with large, ſmooth, broad-ribbed, juicy leaves; and ſlender, ſtriated, branched ſtalks; bearing ſpikes of imperfect flowers ſtanding in five-leaved cups, followed each by a roundiſh, rough, warty ſeed-veſſel. Different ſorts of this plant, ſuppoſed by Linnæus to be varieties of the wild beet found on ſome of the ſea coaſts of England and Holland, are cultivated in our culinary gardens: a whitiſh-leaved called *ſicula* or *cicla*, a green-leaved, and a reddiſh-leaved, all with long thick white roots; and a long-rooted, and a turnep-rooted, all over red. They are all biennial.

Beets, uſed as food, are difficult of digeſtion, and afford little nouriſhment: taken in quantity, they tend to looſen the belly, and are ſuppoſed by ſome to be prejudicial to the ſtomach. Their emollient or laxative virtue is extracted by boiling in water, and may be concentrated, though not without conſiderable diminution, by inſpiſſating the decoction. The red ſorts give out their colour along with their aqueous juice upon expreſſion, and by infuſion tinge rectified ſpirit as well as water of a deep red. The juice, both of the roots and the leaves, of the red and the white beets, ſnuffed up the noſe, is ſaid to be a powerful errhine, occaſioning a copious diſcharge of mucus without provoking ſneezing.

(a) Expunged.

The roots of the beets have, when dry, an agreeable ſweetiſh taſte, which is totally extracted by boiling in rectified ſpirit: the tinctures, on ſtanding ſome weeks in a cool place, depoſite whitiſh ſaline concretions, of a ſaccharine ſweetneſs. Mr. Marggraf obſerves, that the red beet loſes in drying ſeven eighths of its weight, and the white ſix eighths; that the dry beet root yields nearly one twenty-ſixth its weight of the ſaccharine ſalt, and the white ſort one ſixteenth; and that a good ſugar is obtainable from the juice of the freſh roots, by the method practiſed abroad for preparing it from the ſugar cane *(a)*.

BETONICA.

BETONICA Pharm. Edinb.(b) Vetonica Cordi. Betonica purpurea C. B. Betonica officinalis Linn. BETONY, or wood-betony: a low plant, with dark green, oblong, wrinkled, crenated, ſomewhat hairy leaves, ſet in pairs; and ſquare unbranched ſtalks; bearing thick ſpikes of labiated purpliſh flowers, each of which is followed by four oblong triangular ſeeds incloſed in the flower cup. It grows wild in woody and ſhady places, flowers in June and July, and in winter dies to the ground, the roots continuing.

THIS herb is recommended as a corroborant and aperient; in obſtructions of the viſcera; in catarrhal, vertiginous, paralytic, hyſteric, and other diſorders both of the nervous and the vaſcular ſyſtem. Its virtues have, by many practical writers, been greatly exaggerated; thoſe of the more efficacious medicines to which it was joined, as rue, mint, cloves, guaiacum, and others, being often placed to the account of this favourite ingredient.

(a) Mem. de l'acad. des ſcienc. de Berlin, pour l'ann. 1749.

(b) Expunged.

The leaves and tops of betony have an agreeable but weak ſmell, which in keeping is ſoon diſſipated: to the taſte, they diſcover a ſlight warmth, roughiſhneſs and bitteriſhneſs. The powder of the dry leaves, ſnuffed up the noſe, provokes ſneezing, and hence is ſometimes made an ingredient in ſternutatory compoſitions.

Infuſions of the leaves in boiling water ſmell and taſte lightly, and not ungratefully of the herb: on inſpiſſating them, the ſpecific flavour of the betony is diſſipated, and only a weak bitteriſhneſs and a kind of ſaline auſterity remain in the extract. The vapour which exhales in the boiling, caught in diſtilling veſſels, is lightly impregnated with the ſmell of the betony: when large quantities are diſtilled at once, a very ſmall portion of eſſential oil ſeparates, in colour yellowiſh, in taſte moderately warm and pungent, and in ſmell pretty ſtrong, but ſomewhat leſs grateful than the herb in ſubſtance. Spirituous tinctures, in colour deep green, diſcover rather leſs of the ſmell and taſte of the betony than the watery infuſions, though the ſpirit extracts all the active parts of the herb. On inſpiſſating the filtered tinctures, a conſiderable part of the odorous matter exhales: the remaining extract has little ſmell, and a weakly pungent, bitteriſh, aromatic taſte.

The roots are ſaid to be very different in quality from the other parts of the plant; to be nauſeous, bitter, purgative, and emetic *(a)*.

BETULA.

BETULA Pharm. Edinb.(b) & C. B. Betula alba Linn. BIRCH: a tree or ſhrub, common in moiſt woods; with numerous very flexible branches; and ſomewhat oval, ſharp pointed, ſerrated, deep green leaves, hanging on long and weak pedicles; producing ſmall ſcaly cones, which contain little winged ſeeds. The bark, which appears externally white and chapt, conſiſts of a thick brittle ſubſtance, of a dark browniſh red colour, covered with three or four whitiſh, very thin, ſmooth, flexible, tough, ſemitranſparent, membranous coats.

ON deeply wounding or boring the trunk of the birch tree early in the ſpring, there iſſues by degrees a very large quantity of a limpid, watery,

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(a) L'Obel, *Adverſaria, p.* 229. Ray, *Hiſt. plant. p.* 551. Caſpar Hoffman, *De med. officinal. lib.* ii. *cap.* xxxvii. §. 6.

(b) Expunged.

ſweetiſh juice. It is ſaid, that one tree will bleed a gallon or two in a day; that the juice extracted near the root is much more watery, and of leſs taſte, than that obtained from the upper part of the trunk or from the branches; and that after the leaves have begun to appear, the juice loſes its ſweetneſs and becomes diſagreeable. This juice has been drank as an antiſcorbutic and deobſtruent. It ſenſibly promotes urine, and if taken freely, looſens the belly. In keeping, it ſoon turns ſour, unleſs defended from the air, by covering its ſurface with a little oil: by fermentation, it is converted into a weak vinous liquor. Inſpiſſated to the conſiſtence of a thin ſyrup, and ſet in a cool place for ſome weeks, it yields browniſh ſaline concretions, approaching, as Marggraf obſerves, to the nature of manna.

The leaves and the bark of the tree have been employed, chiefly externally, as reſolvents, detergents, and antiſeptics. Simon Paulli relates, that an univerſal pruriginous ſcabies, which had been received by infection, was cured by bathing with a decoction of the bark and young branches, in which ſome nitre and tartar had been diſſolved. With regard to the leaves, they diſcover to the touch a reſinous unctuoſity, and to the taſte an unpleaſant bitterneſs; rubbed a little, they yield a pretty ſtrong, and not diſagreeable, ſmell. The bark has no ſmell: the thin membranes have no taſte; the thicker brittle part has a ſlight roughiſh one. This laſt gives a pale yellowiſh tincture to rectified ſpirit, and a deep yellowiſh red to water: the watery infuſion ſtrikes a browniſh black colour with ſolution of chalybeate vitriol, but immediately throws off the colouring matter and becomes limpid, whereas the generality of theſe kinds of black mixtures retain their blackneſs for a length of time: on inſpiſſating the infuſion, the remaining extract proves moderately auſtere.

The bark of this tree has been recommended alſo in fumigations, for correcting contagious air. The membranes are highly inflammable, in burning yield no particular ſmell, and give out a reſinous exudation of no ſmell or taſte. The brittle part is leſs inflammable, emits a ſtrong acid vapour, and no reſin.

BEZOAR.

BEZOAR: a preternatural or morbid concretion, formed in the bodies of land animals. Several of theſe kinds of ſubſtances have been uſed medicinally, and diſtinguiſhed either by the names of the countries from whence they are brought, or of the animals in which they are generated.

1. Lapis bezoar orientalis *Pharm. Lond.* Oriental bezoar ſtone: ſuppoſed to be produced in the pylorus, or in a cavity at the bottom of the fourth ſtomach, of an animal of the goat kind, which inhabits the mountains in different parts of Perſia. It is ſaid, that the bezoar is found only in the old animals, only in thoſe which feed on ſome particular mountains, as the eaſtern one of the tract called Benna in the province of Laar, and only in a few of theſe; and that, though of great value in Europe, it is of greater in Perſia itſelf; from whence it has been inferred, that the generality of the ſtones, ſold under this name in Europe, muſt be of another original *(a)*. Thus much is certain, that artificial compounds have been often ſubſtituted in the room of this coſtly concretion.

The genuine oriental bezoar of the ſhops is about the ſize of a kidney-bean *(b)*, of a roundiſh or oblong rounded figure, of an even ſmooth ſurface, and of a ſhining olive or dark greeniſh colour: on being broken, it appears compoſed of a number of concentrical coats, of which the inner are ſmooth and gloſſy as the outer: in the middle is either a cavity, or ſome powdery matter, or ſome ſmall bits of the leaves or ſtalks of plants, or other like ſubſtances. The common marks of its genuineneſs are, its ſtriking a yellow or green colour on white paper that has been rubbed with chalk; a red-hot needle not piercing into it, or occaſioning any bubbles, but either making no impreſſion at all, or at moſt taking off only a little ſcale or cruſt; and its ſuffering no diminution of its weight, or diſunion of its parts, by ſteeping in water.

The genuine ſtone has no manifeſt ſmell *(c)* or taſte; and is not ſenſibly acted on by rectified ſpirit any more than by water. Reduced

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(a) Kæmpfer, *Amœnitates exoticæ, p.* 398 & *ſeqq.* Slare, *Diſſertation on bezoar.* Neumann, *Chemical works, p.* 534.

(b) Mercatus (*Metallotheca, armar.* viii. *cap.* i. *p.* 173) deſcribes a ſtone of this kind (preſented by the king of Portugal to cardinal Alexandrinus) weighing four ounces; ſo that if equally compact as the common bezoar (whoſe gravity is to that of water nearly as one and half to one) its volume muſt have been about five cubic inches.

(c) The ſlight ambergris ſmell, perceivable in ſome of the oriental bezoars, is ſuppoſed to be introduced by art: Cartheuſer looks upon thoſe which have this ſmell as being wholly factitious (*Rudimenta m. m.* i. 214.)

Lapis bezoar præparatus *Ph. Lond.*

into an impalpable powder, it retains its greeniſh hue; which, by moiſtening the powder, in levigation, with a little ſpirit of wine, is ſomewhat improved. The powder agitated with water or ſpirit, ſubſides uniformly and totally; leaving no greeniſh matter diſſolved in the liquors, as thoſe powders do, in which the bezoar tincture has been imitated by certain vegetable matters. The powdered bezoar diſſolves almoſt totally, and with conſiderable effervеſcence, in the acids of nitre and of ſea ſalt; and tinges them of a deep yellow or red colour. The vitriolic acid raiſes a ſlight effervеſcence with it, but diſſolves exceeding little. Vinegar likewiſe acts on it very weakly.

Bezoar was formerly accounted a high alexipharmac; inſomuch that the other medicines, poſſeſſed, or ſuppoſed to be poſſeſſed, of alexipharmac powers, have been denominated from it *bezoardics*. It appears, however, that this notion, adopted from the Arabian ſchools, has no juſt foundation; and that this calculous concrete, which lies inactive and indigeſtible in the ſtomach of the animal in which it is produced, is equally indiſſoluble and inactive in the human ſtomach, unleſs where either a morbid acid is generated in the body, which is rarely the caſe in the acute diſeaſes wherein bezoar has been chiefly given, or acid liquors are taken along with it. Solutions of it in the nitrous or marine acids, given in doſes of a few drops with proper diluents, the form in which it was uſed by Kæmpfer, may, doubtleſs, be of ſervice in acute diſeaſes, as antiſeptic and antiphlogiſtic ſaline compounds; though not more ſo than ſolutions of the common teſtaceous earths. The bezoar in ſubſtance can have no other ſalutary operation than as an abſorbent of acid humours; and appears, from experiment, to be the moſt weakly abſorbent, or the moſt difficultly acted on by animal and vegetable acids, of all the earthy bodies commonly made uſe of in this intention. The London college nevertheleſs, after diſcarding it from the compound powder of crabs-claws, in which it was originally an ingredient, were in ſome meaſure neceſſitated to allow ſo much to ancient prejudice, as to direct, for the uſe of thoſe who may ſtill have ſome dependence on it, a ſeparate officinal compoſition, diſtinguiſhed by its name, conſiſting of one part of the prepared or levigated bezoar and twelve of the crabs-claw powder.

Pulv. bezoardicus *Ph. Lond.*

2. Bezoard occidentalis *Pharm. Pariſ.* Occidental bezoar: ſaid to be found in the ſtomach of an animal of the ſtag kind, a native

of Peru and ſome other parts of the Spaniſh Weſt Indies. It is larger than the oriental, from the ſize of a walnut to that of a hen's egg or more*(a)*: its ſurface is rough, and the colour leſs green, being often greyiſh or browniſh without any greenneſs: it is likewiſe more brittle, of a looſer texture, compoſed of thicker coats, and exhibits, when broken, a number of fine cryſtalline ſtriæ curiouſly interwoven. It is leſs eſteemed than the foregoing; though apparently not inferiour, ſo far as is known, in any reſpect that can influence its virtue as a medicine.

3. Lapis simiæ *ſeu bezoard ſimiæ Pharm. Pariſ.* Bezoar of the monkey: ſaid to be found in the ſtomach of certain monkies; which are common in the Braſils, and in ſome parts of the Eaſt Indies, but which very rarely produce the admired ſtone. This ſpecies is about the ſize of a hazel nut, harder than the other bezoars, and of a very dark greeniſh colour almoſt black. Its great ſcarcity has rendered it of more value, and, among ſome, of more medicinal eſtimation, than the two foregoing, but prevented its having a place in the ſhops.

4. Calculus humanus, *bezoar microcoſmicum quibuſdam dictus.* The calculus of the human bladder. This concrete is various in degree of hardneſs, as well as in appearance, figure, and ſize: the ſofter maſſes are for the moſt part pretty eaſily, the harder more difficultly, diſſolved, in part at leaſt, by acids, and corroded by ſoap leys and lime water: other menſtrua for them are not known. Some have employed this ſtone as a ſuccedaneum, and even in preference, to the foregoing coſtly bodies, and report that they have found it to act as an excellent ſudorific and diuretic*(b)*; aſcribing to the ſtony matter the effects of the theriaca, oil of amber, and oil of juniper berries, with which it was joined.

5. Lapis porcinus *Pharm. Pariſ. Lapis malacenſis. Bezoar hyſtricis. Pedro del porco.* Bezoar of the porcupine: ſaid to be found in the

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(a) There are accounts of occidental bezoars of much larger ſizes: Mercatus *(ubi ſupra, p.* 174, 175) deſcribes and figures a ſtone of this kind weighing no leſs than fifty-ſix ounces, though part of the outer cruſts had been removed.

(b) Bontius, *Animadverſiones in Garciam, lib.* i. *cap.* 46.

gall-bladder of an Indian porcupine, particularly in the province of Malacca. It is of a roundiſh figure, of a pale purpliſh colour, of a ſoft ſubſtance, ſmooth and ſlippery to the touch(*a*). This concrete is of a very different nature from the four preceding: it has an intenſely bitter taſte, and, on being ſteeped in water for a very little time, impregnates the fluid with its bitterneſs, and with aperient, ſtomachic, and, as is ſuppoſed, with alexipharmac virtues. How far it differs in virtue from the ſimilar concretions found in the gall-bladder of the ox and other animals, does not appear.

BISMUTHUM.

BISMUTHUM ſive marcaſita Pharm. Pariſ. BISMUTH or TIN-GLASS: a bright whitiſh pulverable metal; near ten times ſpecifically heavier than water; melting long before ignition, a little ſooner than lead, and a little later than tin; ſublimable, by a ſtrong fire, into white flowers; calcining, by a continuance of a heat ſufficient to keep it melted, into a greyiſh powder, which on raiſing the fire runs into a yellow very fuſible glaſs; diſſolving with violence in the nitrous acid, and precipitating in form of a bright white powder on diluting the ſolution largely with pure water; very difficultly acted on by the marine acid, and ſcarcely at all by the vitriolic; giving out very little to the vegetable acids, but impregnating them with a nauſeous taſte. It is extracted from an ore found hitherto chiefly in Saxony; by eliquation, or fuſion in a ſmall heat without addition. The ore is generally very arſenical: whether the biſmuth retains any of the arſenic, has not been ſufficiently examined.

This metal remarkably promotes the facility and tenuity of the fuſion of other metallic bodies: with lead and tin, it forms compounds which melt in ſo ſmall a heat as to have been propoſed by ſome for anatomical injections: the proportions, that have been found to compoſe the moſt fuſible mixtures, are, two parts of lead, three of tin, and five of the biſmuth. It likewiſe remarkably promotes the ſolution of lead in mercury, but has not been obſerved to produce a like effect on other metallic bodies.

(*a*) Mercatus, *metallotheca*, *armarium* viii. *cap.* iii. *p.* 179.

Flor. biſmuth. Magiſterium biſmuthi.

The white flowers ſublimed from this metal, and the white magiſtery precipitated by water from its ſolution in aqua fortis, have been recommended externally againſt gleeting ſores, and internally as diaphoretics ſimilar to the milder antimonial medicines. In the firſt intention, they appear to be greatly inferiour to ſome of the ſaturnine preparations: in the latter, it is not certain what their real effects are, or even whether they are ſafe. At preſent, they are employed only as a fucus, nor is this uſe of them entirely innocent; for they gradually impair the natural complexion, and, as the college of Straſburg obſerves, occaſion a thickneſs and defedation of the ſkin.

BISTORTA.

BISTORTA Pharm. Lond. & Edinb. Biſtorta major radice minus intorta C. B. Polygonum Biſtorta Linn. BISTORT or SNAKEWEED: a plant with oval, pointed, wrinkled leaves, of a dark green colour above and blueiſh underneath, ſtanding on long pedicles, and continued a little way down the pedicle, forming a narrow margin on each ſide: among theſe ariſe round, ſlender jointed, unbranched ſtalks, furniſhed with ſmaller and narrower leaves which have no pedicles; bearing on the top ſpikes of imperfect five-leaved red flowers, which are followed by triangular ſeeds. It is perennial, grows wild in moiſt meadows in ſeveral parts of England, and flowers in May and June.

THE root of this plant is bent and jointed, commonly about the thickneſs of the finger, ſurrounded with buſhy fibres, of a blackiſh brown colour on the outſide, and reddiſh within: it is diſtinguiſhed from the roots of the other biſtorts, by being leſs bent; that of the officinal ſpecies having only one or two bendings, and thoſe of the others three or more.

This root has a ſtrong aſtringent taſte, without any manifeſt ſmell or particular flavour. It is one of the ſtrongeſt of the vegetable ſtyptics, and frequently made uſe of as ſuch, in diſorders proceeding from a laxity and debility of the ſolids, for reſtraining alvine fluxes, after due evacuations, and other preternatural diſcharges both ſerous and ſanguineous. It has been ſometimes given in intermitting fevers; and ſometimes, alſo, in ſmall doſes, as a corroborant and antiſeptic, in acute malignant and colliquative fevers; in which intentions, Peruvian bark has now deſervedly ſuperſeded both this and all the other aſtringents.

The common doſe of biſtort root, in ſubſtance, is fifteen or twenty grains: in urgent caſes, it is extended to a dram. Its aſtringent matter is totally diſſolved both by water and rectified ſpirit*(a); the root, after the action of a ſufficient quantity of either menſtruum, remaining inſipid: the watery tinctures are of a dark browniſh colour, the ſpirituous of a browniſh red. On inſpiſſating the tinctures, the water and ſpirit ariſe unflavoured, leaving extracts of intenſe ſtypticity.

BITUMEN JUDAICUM.

BITUMEN JUDAICUM Ph. Lond. Aſphaltus. JEWS PITCH: a ſolid, light bituminous ſubſtance; of a duſky colour on the outſide, and a deep ſhining black within; of very little taſte, and ſcarcely any ſmell, unleſs heated, in which circumſtance it emits a ſtrong pitchy one; not ſoluble in vinous ſpirits or in oils; difficultly and only imperfectly melting in the fire; and leaving, on being burnt, a large quantity of aſhes. It is ſaid to be found plentifully in the earth in ſeveral parts of Egypt, and floating on the ſurface of the dead ſea; at firſt ſoft, and growing hard by age.

ABUNDANCE of virtues are attributed to this bitumen; reſolvent, diſcutient, ſudorific, emmenagogue, and others. It has long, however, been diſregarded in this country: the college of Edinburgh has now expunged it from the catalogue of officinals, and that of London retains it only as an ingredient in one of the compoſitions which complaiſance to antiquity has preſerved in the ſhops. Nor is it, among us, to be often met with; its place being generally ſupplied by different bituminous ſubſtances found in France, Germany, and Switzerland, ſometimes by the caput mortuum remaining after the diſtillation of amber, and ſometimes by common pitch. Its melting in the fire only partially or not at all, and the quantity of aſhes it leaves in burning, diſtinguiſh it from theſe ſubſtances, and ſhew, at the ſame time, that in its moſt genuine and perfect ſtate it is a very impure bitumen, mixed largely with

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*(a) Spirit has little effect on it. *Cullen.*

earthy matter. Diſtilled in a retort, it yields, according to Neumann, a little inſipid phlegm, and about one eleventh its weight of oil, reſembling the native petrolea, but of a ſomewhat more diſagreeable empyreumatic ſmell.

BOLUS.

BOLE: a friable earthy ſubſtance, uniting with water into a ſmooth paſte, adhering to the tongue, and diſſolving as it were in the mouth: of the clayie kind, but more readily imbibing water than the clays ſtrictly ſo called; when moiſtened, leſs viſcous and coheſive; more eaſily diffuſible through water by agitation; and more freely ſubſiding from it.

1. BOLUS ARMENA *Pharm. Lond.* Armenian bole, or bole-armenic: of a pale but bright red colour, with a tinge of yellow; harder, and of a leſs gloſſy ſurface, than moſt of the other boles.

2. BOLUS GALLICA *Pharm. Lond. & Edinb.* French bole: of a pale red colour, variegated with irregular ſpecks and veins of whitiſh and yellow.

MANY other bolar earths have been recommended for medicinal uſes, and were formerly ranked among the officinals; as, red boles from Armenia, Lemnos, Strigonium, Portugal, Tuſcany, and Livonia; yellow boles from Armenia, Tockay, Sileſia, Bohemia, and Blois; white boles from Armenia, Lemnos, Nocera, Eretria, Samos, Chio, Malta, Tuſcany, and Goltberg. Several of theſe earths have been commonly made up into little cakes or flat maſſes, and ſtamped with certain impreſſions; from whence they received the name of *terræ ſigillatæ,* or ſealed earths. The Armenian and Lemnian have been generally ſuppoſed to be the beſt, but are rarely met with in the ſhops: the common French bole, and ſome bolar earths found in our own country, and even white clay artificially coloured with ochre or colcothar of vitriol, have commonly ſupplied the place both of thoſe and of the other coloured boles. The ſubſtitution of the French to the Armenian, in the ſeveral compoſitions wherein that earth is directed as an ingredient, is now allowed by the London college: and indeed all theſe earthy bodies, however differing from one another in the degree or ſpecies of their colour, or in their texture and compactneſs, appear, in regard to their medicinal qualities, to be very nearly, if not entirely, alike.

All the boles have for their baſis one and the ſame *argillaceous* earth; which is not diſſoluble, by the heat of boiling water, in acids, in alkalies, or in any other known menſtruum; which, in a ſtrong heat, grows hard, contrary to all the other bodies of an earthy or ſtony nature, which receive from fire a greater or leſs degree of friability; and at the ſame time loſes its property of imbibing water, and of being reduced thereby into a tenacious maſs. The boles and clays, both in their natural ſtate and when indurated by fire, become diſſoluble in part, by ſtrongly boiling them in the concentrated vitriolic acid, till the more phlegmatic parts of the liquor have exhaled, and the matter remains dry. The compound which the earth, by this proceſs, forms with the acid, is of the ſame nature with alum: it diſſolves in water, and may be cryſtallized into perfect alum, by adding a ſuitable quantity of any volatile or fixt alkaline ſalt to ſaturate the redundant acid, and after due evaporation ſetting the liquor to ſhoot.

The colours of the boles proceed from a ſlight admixture of a ferrugineous calx; which may be extracted by digeſtion in ſpirit of ſalt or aqua regis, but is ſcarcely acted upon by any acid of the vegetable or animal kingdom. Some of them contain a portion of calcareous earth, which is extracted by all acids except the vitriolic, and diſcovers itſelf by raiſing an efferveſcence on the affuſion of the acid. The ſpecimens I examined of the bole of Blois gave out a conſiderable quantity of this earth, thoſe of the common French bole exceeding little, and the Armenian none: poſſibly, however, different maſſes of one kind of bole may differ, in this reſpect, as much as different boles. All the boles ſeem to participate alſo of vitriolic acid; which is ſo intimately blended with the other matter, as not to be ſeparable, or diſcoverable, without violence of fire.

The ferrugineous calx and calcareous earth are likewiſe very intimately blended with the proper bolar matter; inſomuch, that when the compound is diffuſed through water, it ſettles equally and uniformly without any ſeparation of its parts. If the bole contains any ſand or ſmall ſtones, or has been artificially coloured, the ſand, ſtones, and colouring ingredients, ſeparate in the water, and being heavier than the bolar earth, ſubſide before it. On this principle, the boles may be purified from the gritty matter often intermixed among them, and the natural boles diſtinguiſhed from artificial compoſitions.

The medical virtues of the boles appear to depend on the ſimple bolar or argillaceous earth. As this earth is not diſſoluble by any fluid that can exiſt in the bodies of animals, it can act no otherwiſe than by imbibing, or giving a greater degree of conſiſtence to thin ſharp humours in the firſt paſſages, and in ſome meaſure defending the ſolids from their acrimony. In conſequence of this virtue, the boles may be of ſome ſervice in alvine fluxes, cardialgic complaints, and in ſome kinds of acute diſeaſes; though they are not poſſeſſed, as they have been commonly ſuppoſed to be, of any truly aſtringent, or abſorbent, and much leſs of any alexipharmac powers. The ſenſation of aſtringency which they generally occaſion, in ſome degree, in the mouth, ſeems to conſiſt only in their adhering to and drying the part, by imbibing the fluids that moiſten it. Their doſe is from fifteen or twenty grains to a dram.

BONUS HENRICUS.

BONUS HENRICUS, ſive Lapathum unctuoſum, Pharm. Edinb.(a) *Chenopodium Pharm. Pariſ. Tota bona Dod. Lapathum unctuoſum folio triangulo C. B. Chenopodium Bonus Henricus Linn.* ENGLISH MERCURY: a plant with triangular leaves, covered underneath with a whitiſh unctuous meal; and ſtriated hollow ſtalks, partly erect, and partly procumbent, bearing on the top ſpikes of ſmall imperfect flowers, each of which is followed by a ſmall black ſeed incloſed in the cup. It is perennial, grows by road ſides and in waſte grounds, and flowers in Auguſt.

THE leaves of this plant, to the taſte mucilaginous and ſomewhat unpleaſantly ſubſaline, are accounted emollient; and in this intention have been made an ingredient in decoctions for glyſters. They are applied by the common people to fleſh wounds and ſores, under the notion of drawing and healing. In ſome places, the young ſhoots are eaten in the ſpring as aſparagus, and ſaid to looſen the belly, and promote urine.

(a) Expunged.

BORAGO.

BORAGO Pharm. Edinb.(a) *Borago hortenſis Raii ſynopſ. Bugloſſum latifolium borrago flore cæruleo C. B. Borago officinalis Linn.* BORAGE: a very hairy rough plant, with wrinkled blackiſh green leaves approaching to an oval ſhape, and round hollow ſtalks, on which the leaves are ſet alternately: on the tops of the branches come forth blue, ſometimes reddiſh or whitiſh, monopetalous flowers, each of which is divided into five ſharp-pointed ſegments, and followed by four wrinkled blackiſh ſeeds lying naked in the enlarged cup. It is perennial, and grows wild on waſte grounds and on old walls.

THE leaves of this plant are very juicy, of no ſmell, and of hardly any particular taſte: they ſeem nevertheleſs to contain ſubſtances of ſome medicinal activity, though in too ſmall proportion to be ſenſible till ſeparated from the herbaceous matter. Mr. Boulduc relates, that a decoction of borage leaves, evaporated to the conſiſtence of a ſyrup, and ſet by for a few days, yielded ſaline cryſtals, partly in form of fine needles, and partly cubical: that the needled cryſtals were found to be perfect nitre, and the cubical ſea ſalt: that by paſſing the decoction through quicklime before the inſpiſſation, both ſalts were obtained in greater purity and in larger quantity: that the ſubſtance of the leaves, remaining after the boiling, being dried and burnt, and the aſhes elixated with water, the lye, properly evaporated and ſet to ſhoot, yielded firſt a vitriolated tartar, and afterwards ſea ſalt, the liquor, after the cryſtallization, proving ſimply alkaline *(b)*. From this analyſis it may be preſumed, that the aperient and refrigerating virtues, aſcribed to borage leaves, are not wholly without foundation; though theſe virtues are undoubtedly very weak. Malouin remarks, that the juice of the leaves, which is not green, like that of moſt other herbs, but of a brown colour, added to bitter mixtures of the juices of creſſes and chervil, diſſipates their bitterneſs.

The flowers of the plant have been principally made uſe of, and are generally ranked among the cordials. Medicines may act as cordials, either by virtue of ſome warmth, pungency, or fragrance; or by a ſaline quality, abating immoderate heat: but borage flowers ſeem to have little

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(a) Expunged.

(b) Mem. de l'acad. roy. de ſcienc. de Paris, pour l'ann. 1734.

power of operating in either of theſe intentions. When freſh, they have a very ſlight ſmell, of the agreeable kind, which in drying is loſt: to the taſte, both the flowers in ſubſtance, and an extract made from them by water, are only mucilaginous and ſweetiſh.

BORAX.

BORAX Pharm. Lond. *Borax, Tincar, Ph. Edinb.* BORAX: a cryſtalline ſalt; very difficultly ſoluble in cold water; ſwelling and bubbling up in the fire, and changing into a light white ſpongy friable matter, which, ſoon ſubſiding on a continuance of the fire, melts into a ſubſtance reſembling glaſs, but which is ſtill found to be diſſoluble in water, though more difficultly than the borax at firſt.

It is brought from the Eaſt Indies in a very impure ſtate; conſiſting partly of large hexaedral priſmatic flatted cryſtals, but chiefly of ſmaller and more irregular ones, partly whitiſh and partly green, joined together as it were into one lump by a fetid greaſy, or oily, yellow ſubſtance; intermingled with ſand, ſmall ſtones, and other impurities. Of its origin and preparation we have no certain account.

This impure borax was formerly refined at Venice, afterwards in Holland only, and now by ſome particular perſons in England alſo, into large irregular colourleſs maſſes, in appearance reſembling alum. The ſalt is commonly called tincal in its rough ſtate, and borax when thus purified or refined. The method of refining it is kept a ſecret. Certain additional matters are ſuſpected to be employed; the common refined borax being different in ſome reſpects, particularly in its power of vitrefying earthy bodies, from the cryſtals unrefined or ſimply purified by ſolution.

THE purer cryſtals of tincal, or refined borax, diſſolve, by boiling, in a ſmall quantity of water, ſo as in cooling to concrete almoſt all into a ſolid maſs, only a very little liquid remaining on the top: to keep them diſſolved in the cold, more than fourteen times their weight of water is neceſſary. On boiling the impure tincal in water, the oil diſſolves along with the ſalt into a ſoapy liquid; from whence it may be preſumed that the oily matter is not of a mineral, but of a vegetable or animal origin. From this ſolution it is very difficult to ſeparate the oil, without additions which alter the quality of the ſalt: but if the rough tincal be previouſly heated in an iron ladle, or other convenient veſſel, till it ceaſes to bubble and flame, the oil is deſtroyed or made indiſſoluble, and boiling water extracts from the black maſs only the pure borax.

Pure borax has a ſweetiſh ſomewhat pungent taſte, leaving in the mouth an impreſſion like that of alkaline ſalts, but far milder. Like alkaline ſalts alſo, it changes the colour of blue flowers to green, precipitates earthy and metallic bodies diſſolved in acids, and renders vegetable and animal oils miſcible with water: it does not, however, ſenſibly effervesce with acid any more than with alkaline liquors. It diſſolves in acids more eaſily than in water, and promotes likewiſe the ſolution of ſome vegetable acid ſalts of themſelves difficultly diſſoluble. A mixture of borax with twice its weight of tartar diſſolves in about one ſixth part of the quantity of water that would be neceſſary for their ſolution ſeparately: the liquor taſtes acid, like tartar by itſelf, and depoſites a conſiderable quantity of tartar in cooling. About equal parts of the two form a compound perfectly neutral, in taſte more like borax than tartar, which is kept diſſolved by five times its weight of water a little above freezing. On inſpiſſation, a viſcous tenacious maſs is left, which does not cryſtallize, and which deliquiates in the air. Borax affords alſo glutinous compounds with all the other acids except the vitriolic: ſaturated ſolutions even of the borax by itſelf are conſiderably ſo.

This ſalt appears to conſiſt of the mineral alkali or baſis of ſea ſalt, united with a ſmaller proportion of a peculiar ſaline ſubacid concrete. By all the mineral acids, and, as is ſaid, by the acetous, its conſtituent parts are ſeparable from one another; the acid uniting with the alkaline baſis, and disjoining therefrom the ſubacid ingredient of the borax.

This analyſis is moſt commodiouſly effected by the vitriolic acid. A mixture of nine parts of borax, three of oil of vitriol, and one of water, being urged, in a wide-necked retort, with a fire at firſt gentle and afterwards pretty haſtily increaſed till the veſſel becomes red hot; the ſubacid ſalt of the borax, called ſedative ſalt, riſes into the neck, and concretes into thin ſhining white plates. But as this ſalt proves volatile only while moiſt, a part of it remains behind, and may be ſublimed, like the firſt, by pouring back on the reſiduum the liquor that diſtills, and renewing the operation. The ſame ſalt may be obtained more commodiouſly, though ſcarcely in ſo pure a ſtate, by adding the oil of vitriol to

Sal. ſedativ. *Phar. Pariſ.*

to the borax diſſolved in water, and, after due evaporation, ſetting the mixture to ſhoot: the ſedative ſalt cryſtallizes on the ſurface, much ſooner than the other ſaline matter, into thin plates; which, uniting together, and growing heavier, fall to the bottom. The ſalt, which in either caſe remains after the ſeparation of the ſedative ſalt, is a combination of the vitriolic acid with the alkaline baſis of the borax, and has not been obſerved to differ from the common combination of that acid with the alkaline baſis of ſea ſalt, that is, from the ſal mirabile or cathartic ſalt of Glauber. The ſedative ſalt, joined to the marine alkali, recompoſes borax again.

The peculiar and characteriſtic ingredient of the borax, though called ſubacid from its property of neutralizing alkalies, ſcarcely diſcovers any other mark of acidity. Its taſte is bitteriſh, accompanied with a ſlight impreſſion of coolneſs. It makes no change in the colour of blue flowers, and no efferveſcence with alkalies or with acids. It melts in a moderately ſtrong fire, and aſſumes a perfect vitreous appearance; but this apparent glaſs, as well as the ſalt itſelf, may be totally ſublimed, if repeatedly moiſtened, by a leſs degree of heat; and totally, though difficultly, diſſolved both by water and by rectified ſpirit.

It is obſervable, that the ſpirituous ſolution of the ſedative ſalt, ſet on fire, burns with a green flame; and that borax itſelf, boiled in ſpirit, is partially diſſolved, and tinges its flame of the ſame colour. Perhaps it is principally, or ſolely, this ſalt, that the ſpirit extracts from the borax; for ſpirit burnt on the alkali of borax, exhibits no greenneſs.

Borax is accounted an efficacious deobſtruent, diuretic, emmenagogue, and promoter of delivery. Its virtues have not as yet been thoroughly aſcertained by experience, and are by many queſtioned; the borax having generally been given in conjunction with other ſubſtances, to which the effects, experienced from the compound, may be, in part at leaſt, attributed. Thus, in the powder for promoting delivery, half a dram of the borax, the mean doſe of this ſalt, is accompanied with eleven grains and a quarter of ſaffron, the ſame quantity of caſtor, a drop of oil of cinnamon, and three fourths of a drop of oil of amber. That the borax itſelf, however, has really ſome virtues of this kind, may be preſumed from the effects it has been obſerved to produce when uſed in large quantity: Trioen relates, that an ounce and a half of borax having been taken by a young woman in miſtake for creme of tartar, an uterine

Pulvis ad partum *Ph. Edinb.**(a)

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*(a) Expunged.

hemorrhage ſucceeded, ſo profuſe, that life was deſpaired of: the flux was got under by medicines; but the ill ſtate of health, and almoſt univerſal œdema, which followed it, were laſting *(a)*. Solution of borax has been found to be a powerful diſſolvent of aphthous cruſts in the mouth and fauces of children *(b)*.

The peculiar ſaline concrete, extricated from borax by acids, is ſuppoſed to be antiſpaſmodic and anodyne, whence its name *ſedative* ſalt. It is ſaid to calm the heat of the blood in burning fevers, to prevent or remove delirious ſymptoms, and allay, for a time, melancholical, hypochondriacal, and hyſterical complaints. It continues in ſome eſteem in France, where it was firſt diſcovered by Mr. Homberg, but has never come into practice among us. Its doſe is from three grains to a ſcruple.

BOTRYS.

BOTRYS: a low ſomewhat hairy plant, full of branches, bearing numerous imperfect flowers: the flower ſtands in a five-leaved cup, which forms a covering to a ſmall roundiſh ſeed.

1. BOTRYS *Pharm. Edinb.(c) Botrys ſive ambroſia Pharm. Pariſ. Botrys ambroſioides vulgaris C. B. Chenopodium Botrys Linn.* Jeruſalem oak: with oblong pointed, deeply ſinuated leaves like thoſe of the oak tree, of a yellowiſh green colour on the upper ſide, purpliſh underneath, marked with large red veins, and placed alternately: the flowers ſtand in cluſters, on divided pedicles, in the boſoms of the leaves.

2. BOTRYS MEXICANA *Pharm. Pariſ. Botrys ambroſioides mexicana C. B. Chenopodium ambroſioides Linn.* Mexico tea: with pale green triangular leaves, and undivided flower-ſtalks: greatly reſembling the wild orach.

BOTH theſe plants are natives of the ſouthern parts of Europe, and ſown annually with us in gardens. The leaves and flowery heads have a pretty ſtrong and not unpleaſant ſmell, and a moderately aromatic ſomewhat bitteriſh taſte: on much handling them, an unctuous reſinous juice adheres, in conſiderable quantity, to the fingers. The proper menſtruum of their active matter is rectified ſpirit: they nevertheleſs give out their more valuable parts to boiling water alſo, which they impregnate ſtrongly with their ſmell, and conſiderably with their taſte. The infuſions, which are not unpalatable, drank as tea, are ſaid to be of ſervice in humoural aſthmas and coughs, and other diſorders of the breaſt: they are ſuppoſed alſo to be antiſpaſmodic and antihyſteric.

(a) *Obſervationum medico-chirurg. faſciculus, p.* 18.

(b) Biſſet, *Eſſay on the medical conſtitution of Great Britain, p.* 203.

(c) Expunged.

BRASSICA.

BRASSICA Pharm. Edinb.(a) CABBAGE. *Braſſica capitata alba C. B.* White cabbage and coleworts. *Braſſica capitata rubra C. B.* Red cabbage. *Braſſica rubra C. B.* Red coleworts. *Braſſica ſabauda: braſſica alba capite oblongo non penitus clauſo, C. B.* Savoy. *Braſſica cauliflora C. B.* Cauliflower. Theſe and the other ſorts of cabbages, raiſed in our culinary gardens, are ſuppoſed to be only varieties of the ſmaller kind, which, in ſome parts of England, about the ſea coaſts, is found wild: accordingly they are joined by Linnæus into one ſpecies, under the name of *braſſica (oleracea) radice cauleſcente tereti carnoſa.* They are all biennial.

THE ſeveral ſorts of cabbages are commonly accounted hard of digeſtion, and of little nouriſhment, but perhaps not very juſtly. For as they have manifeſtly a ſtrong tendency to putrefaction, running into this ſtate ſooner than almoſt any other vegetable, and emitting alſo during the putrefaction a more offenſive ſmell, nearly approaching to the fetor of the animal kingdom; it does not ſeem irrational to preſume, that of all the oleraceous herbs, cabbages may be the moſt eaſily reſoluble in the ſtomach, the moſt nutritious, and the leaſt remote from the nature of animal food. Thus much is certain, that they are, in general, not unwholeſome; that they do not induce, or promote, a putrid diſpoſition in the human body, but on the contrary prove a ſalubrious aliment in the true putrid ſcurvy*(b); that when taken freely, they tend to looſen the belly and produce flatulencies; and that their laxative matter is extracted by long boiling in water.

(a) Expunged.

*(b) Cabbages cut in ſlices and packed up in a caſk with ſalt and other additions, ferment, and acquire an acid taſte, in which ſtate they are much eaten in Germany under the name of *ſaur kraut.* This has lately been introduced as an article of diet in the Britiſh navy, and has been found to keep well in long voyages, and to prove a very uſeful antiſcorbutic.

Of all theſe herbs, the white cabbage is the moſt putreſcible; and the red ſweeteſt, and moſt emollient or laxative. If the ſtalks of red cabbage, towards the end of autumn, be cut longitudinally and ſet by for ſome time in a place not warm, a laxative juice, reſembling honey or manna, exudes from the inciſions*(a)*. A decoction of this laſt kind has been greatly recommended in hoarſeneſſes and ſome diſorders of the breaſt, for ſoftening acrimonious humours, and promoting expectoration. Boerhaave tells us of very dangerous diſorders of the cheſt cured by the uſe of a decoction of red cabbage with a little ſalt and orange juice*(b)*.

BRASSICA MARINA.

BRASSICA MARINA, ſoldanella, Pharm. Edinb. (c) Soldanella & convolvulus maritimus Ph. Pariſ. Soldanella maritima minor C. B. Convolvulus Soldanella Linn. SOLDANELLA: a ſpecies of convolvulus, with roundiſh or kidney-ſhaped leaves ſet on long pedicles; and large reddiſh-purple flowers ſtanding ſolitary in the boſoms of the leaves. It grows wild about the ſea coaſts in the north of England, and flowers in June.

THE leaves of ſoldanella are ſaid to be a ſtrong and a rough cathartic, generally occaſioning gripes and diſordering the ſtomach. Their virtue reſides in an acrid, bitteriſh, milky juice, which exudes upon wounding them. In drying, they loſe much of their taſte, but ſeem to retain their purgative virtue: a decoction of from half a dram to two or three drams of the dried leaves is directed for a doſe. In ſome places, it is cuſtomary among the common people to prepare a ſtrongly purgative liquor by boiling a ſmall handful of the freſh leaves in broth. But as their degree of ſtrength is very little known, and as we have many other medicines, for the ſame intention, whoſe qualities have been aſcertained by general experience, the ſoldanella, though retained in moſt catalogues of the materia medica, ſtands excluded from practice.

(a) Hoffman, *De remediis domeſticis*, §. 14.

(b) Boerhaave, *Hiſt. plant. hort. Lugd. Bat. p.* 423.

(c) Expunged.

BRYONIA.

BRYONIA.

BRYONIA ALBA Pharm. Edinb. & Linn. Vitis alba ſive bryonia J. B. Bryonia aſpera ſive alba baccis rubris C. B. BRYONY or WILD VINE: a perennial rough plant, growing wild in hedges, and climbing on the buſhes with curled tendrils. The leaves are in ſhape ſomewhat like thoſe of the vine, irregularly pentagonal, with a conſiderable indentation between every two angles, and the extreme ſegment longeſt: in their boſoms come forth cluſters of greeniſh-white bell-ſhaped monopetalous flowers, divided into five roundiſh ſections, adhering firmly to the cup; ſucceeded by red berries, containing an extremely viſcid pulp with ſmall ſeeds. The root is very large, ſometimes as thick as a man's thigh, of a yellowiſh or browniſh colour on the outſide, and white and fungous within.

FRESH bryony root, taken up in the beginning of ſpring, abounds with a thin milky juice: if the upper part of the root be bared of earth, and the top cut over tranſverſely, the juice continues to riſe gradually to the ſurface, in notable quantity, for two or three days ſucceſſively, and may be collected by forming a cavity in the middle to receive it. Both the root in ſubſtance, and the juice, have a diſagreeable ſmell, and a nauſeous, bitter biting taſte: applied for ſome time to the ſkin, they inflame or even veſicate the part. On drying the one, or inſpiſſating the other, they loſe moſt of their acrimony and nearly the whole of their ill ſcent. In ſummer, the root proves much leſs juicy, and weaker both in ſmell and taſte.

This root, taken in powder from a ſcruple to a dram, proves a ſtrong cathartic. It was formerly given, both as a purge, in maniacal and hydropic caſes; and, in ſmaller doſes, as a reſolvent and deobſtruent, in uterine and aſthmatic diſorders, in which it is reported to have been of great efficacy. At preſent it is, in this country, very rarely made uſe of in either intention; on account, not entirely of the violence of its operation, for purgatives as violent as it are ſtill retained in practice; but partly of its degree of activity, in different ſtates and forms, being very variable, and leſs aſcertained than that of other cathartics in more general uſe. It is ſaid, that when freſh it operates, violently, upwards as well as downwards; and that when dry, it acts with leſs violence, and chiefly by ſtool *(a)*; that the juice, which iſſues from it ſpontaneouſly, purges mildly in doſes of a ſpoonful *(b)*; that the freſh root, bruiſed and freed from its juice by preſſure, and afterwards dried, is ſtill purgative *(c)*; and that the expreſſed juice exſiccated, and the farinaceous fecula which ſubſides from it on ſtanding, are of little activity *(d)*: that an extract made from the freſh root, by boiling it in wine, and preſſing out and inſpiſſating the decoction, operates with ſufficient mildneſs, in doſes of from half a dram to a dram *(e)*, both by ſtool and urine; and that infuſions in water are chiefly diuretic. Burggrave relates, as from his own knowledge, a pretty remarkable account of the effects of the watery infuſion and juice in this laſt intention. From a freſh root, as thick as can be procured and about a ſpan long, he directs about an inch of the top to be cut off, and a large conical piece to be cut out to two thirds the depth of the root: into this cavity put two ounces or more of ſugar-candy in powder, above which inſert the cone properly detruncated, and ſet the root upright in a warm place for twenty-four hours: the ſugar being now diſſolved by the native juice of the bryony, the excavated part of the root is to be cut off, and one, two, or three ſlices, from the lower ſolid part, infuſed in water. "Give, ſays the "author, to an hydropic perſon, one ſpoonful of the ſaccharine ſolution "in the morning, and repeat it every two hours till the patient begins "to make water profuſely, for it will not purge: when great thirſt is "complained of, give a draught of the infuſion, which will likewiſe not "purge, but work ſtill more by urine. Then carefully provide againſt "any ill effects enſuing from the inanition of the abdomen and collapſion "of the integuments *(f)*."

Externally, the freſh root has been employed in cataplaſms, as a reſolvent and diſcutient; againſt hard and œdematous tumours, ſtagnations

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(a) Hermann, *Cynoſura m. m. edit. Boecler.* i. 141, *&c.*—Boulduc's opinion, of the dry root being ſtrongeſt *(mem. de l'acad. roy. des ſcienc. de Paris, pour l'ann.* 1712) ſeems to have been deduced from a principle, which cannot be admitted, that the root ſuffers no other change in drying than the diſſipation of its watery humidity.

(b) Stoffelius, *apud Joan. Bauhin. hiſt. plant. tom.* ii. *p.* 143.

(c) Le Mort, *Morley collect. chym. Leydenſ. p.* 120.

(d) Boerhaave, *Hiſt. plant. Lugd. Bat. p.* 497. Geoffroy, *m. m.* iii. 223.

(e) Geoffroy, *m. m.* iii. 223.

(f) Burggrave, *Lexicon medicum, p.* 1710.

and coagulations of blood from external injuries, and iſchiadic and other rheumatic pains.

BUGLOSSUM.

BUGLOSSUM SATIVUM Pharm. Edinb.(a) *Bugloſſum anguſtifolium majus C. B. Anchuſa officinalis Linn.* BUGLOSS: a rough plant, greatly reſembling borage, and differing from it chiefly in the leaves being narrow, leſs prickly, not wrinkled, and in colour blueiſh green; and in the ſegments of the flowers being obtuſe. It grows wild, on waſte grounds, in the ſouthern parts of Europe, is cultivated with us in gardens, flowers from June to the end of ſummer, and in winter dies to the ground, the roots abiding.

THIS plant appears to be nearly ſimilar to borage, in its medicinal qualities as well as in its external form. The principal difference ſeems to conſiſt, in the leaves being ſomewhat leſs juicy, and the roots more mucilaginous. The roots, leaves, and flowers, are ranked among the articles of the materia medica, but are very rarely made uſe of.

BUGULA.

BUGULA, conſolida media, Pharm. Edinb.(b) *Prunella germanis Trag. Conſolida media pratenſis cærulea C. B. Ajuga reptans Linn.* BUGLE OR MIDDLE CONSOUND: a low plant, with two kinds of ſtalks; round creeping ones, which ſtrike root at the joints; and upright ſquare ones, hairy on two of the oppoſite ſides, alternately, from joint to joint, bearing looſe ſpikes of blue labiated flowers, of which the upper lip is wanting: the leaves are ſomewhat oval, ſoft, ſlightly cut about the edges, and ſet in pairs at the joints. It is perennial, found wild in woods and moiſt meadows, and flowers in May.

THE leaves of bugle diſcover, on firſt chewing, a ſweetiſh taſte, which is followed by a conſiderable bitteriſhneſs and roughiſhneſs. Infuſions of them, or the expreſſed juice, are recommended as vulneraries, or as mild aſtringents and corroborants, in fluxes and other diſorders. Some have obſerved, that they do not bind the belly, like the other *conſolidæ*, but that, on the contrary, decoctions of them are gently laxative, and of great uſe in phthiſes and internal ulcerations (a). The roots of the plant are conſiderably aſtringent, as appears both from their taſte, and from their ſtriking a black colour with ſolution of chalybeate vitriol.

(a) Expunged. (b) Expunged.

BURSA PASTORIS.

BURSA PASTORIS Pharm. Pariſ. Burſa paſtoris major folio ſinuato C. B. Thlaſpi Burſa Paſtoris Linn. SHEPHERDS PURSE: a plant with ſmall tetrapetalous whitiſh flowers, along the upper part of the branches, followed each by a triangular ſeed veſſel reſembling a purſe, whence its name: the lower leaves are for the moſt part deeply jagged like thoſe of dandelion, and widen from the bottom forwards; thoſe on the ſtalks are entire, and moſt of them broadeſt at the bottom, with a little ear on each ſide at the juncture with the ſtalk. It is annual, common in waſte grounds, and flowers from April to the end of ſummer.

THIS herb has, when freſh, an unpleaſant ſmell, which in drying is diſſipated: its taſte is almoſt merely herbaceous. An extract made from the dry leaves by water is ſomewhat ungratefully mucilaginous and ſubſaline: an extract made by rectified ſpirit has ſomewhat more of an unpleaſant, though weak, taſte. No pungency or aſtringency could be perceived either in the leaves themſelves or in the extracts; nor did a decoction of them ſtrike any degree of blackneſs with ſolution of chalybeate vitriol. There does not appear, therefore, to be any foundation for the ſtrong ſtyptic virtues, for which this herb has been generally recommended by writers on the materia medica; or for the acrid inflammatory power, which ſome (miſled probably by its botanic affinity with muſtard and ſome other acrid vegetables) have aſcribed to it.

BUXUS.

BUXUS Pharm. Lond. Buxus arboreſcens C. B. Buxus ſempervirens Linn. BOX TREE: a ſmall evergreen tree, or ſhrub, with numerous branches, clothed with firm, ſhining, ſomewhat oval leaves: the wood is of a yellow colour, and more compact and ponderous than any of the other European woods: the flowers are imperfect; the fruit, which grows on a diſtinct part of the tree, is a green berry, divided into three cells, containing ſix ſmall ſeeds. It is found wild in ſome parts of England.

(a) La Poterie *(Poterius) Pharm. ſpagyr. lib.* i. *ſect.* i. *cap.* 2.

The leaves of this tree have a faint unpleaſant ſmell, which is in great part diſſipated in drying, and pretty ſtrongly impregnates water in diſtillation: their taſte is ſomewhat of the bitter kind, very ſtrong, and very nauſeous. It is ſaid, that their effluvia are narcotic; and that the leaves in ſubſtance, and infuſions or decoctions of them, are aperient and purgative.

The wood gives a bright yellow tincture to ſpirituous menſtrua, and a paler yellow to water. Chewed, in ſubſtance, it ſcarcely diſcovers any taſte: an extract made from it by rectified ſpirit, which amounts to little more than one fifteenth part of the weight of the wood, is weakly bitteriſh: by water was obtained nearly one thirtieth its weight, of a ſtronger taſted, ungratefully ſaline extract. From theſe experiments it may be preſumed, that boxwood contains little active matter; and that this matter is not of the pungent reſinous,. but of the ſaline kind; and conſequently that it differs greatly from guaiacum wood, to which it is by many writers ſuppoſed to be ſimilar.

CACAO.

CACAO Pharm. Lond. CACAO or CHOCOLATE NUT: an oblong roundiſh nut, nearly of the ſhape of an almond, but larger: the ſhell is dark coloured, brittle, and thin: the kernel is both externally and internally browniſh, divided into ſeveral unequal portions, which are joined firmly together. It is the produce of a ſmall American tree, *(Cacao Sloan. Jam. Amygdalis ſimilis guatimalenſis B. C. Theobroma Cacao Linn.)* bearing a large red fruit ſhaped like a cucumber, which contains thirty or more of the nuts. There are ſeveral ſorts of theſe nuts in the ſhops, diſtinguiſhed by their ſize, and the places whence they are brought: the larger kind, from the province of Nicaragua in Mexico, is moſt eſteemed.

Cacao nuts have a light agreeable ſmell, and an unctuous, bitteriſh, roughiſh, not ungrateful taſte: thoſe of Nicaragua and Caracco are the moſt agreeable; thoſe of the French Antilles, and our own American iſlands, the moſt unctuous. All the ſorts, thoroughly comminuted and committed to the preſs, yield a conſiderable quantity of a fluid oil, of the ſame general qualities with thoſe obtained from other ſeeds and kernels: boiled in water, they give out a large proportion, half their weight or more, of a ſebaceous matter, which gradually concretes upon the ſurface as the liquor cools. For obtaining this product to the beſt advantage, the faculty of Paris directs the nuts to be ſlightly roaſted in an iron pan, cleared from the rind and germ, levigated on a hot ſtone, then diluted with a proper quantity of hot water, and kept in a water-bath till the oil riſes to the top; which, when concreted, looks brown, and by repeated liquefactions in hot water becomes white. This vegetable ſevum is not liable to grow rancid in long keeping; and hence is recommended as a baſis for odoriferous unguents, and the compoſitions called apoplectic balſams.

Oleum ſeu butyrum e nucleis cacao *Pharm. Pariſ.*

The principal uſe of theſe nuts is for the preparation of the dietetic liquor, chocolate; a mild unctuous fluid, ſuppoſed to be ſerviceable in conſumptive diſorders, emaciations, and an acrimonious ſtate of the juices in the firſt paſſages.

CALAMINARIS.

LAPIS CALAMINARIS Ph. Lond. & Edinb. Cadmia foſſilis; Cadmia lapidoſa. Calamine or Calamy: a mineral ſubſtance, of a greyiſh, browniſh, yellowiſh, or pale reddiſh colour, and ſometimes of all theſe colours variouſly mixed; conſiderably heavy; and moderately hard, but never ſufficiently ſo to ſtrike fire with ſteel; when mixed with powdered charcoal, changing copper, by fuſion, into a yellow metal, called braſs. It is found plentifully in England, Germany, and other countries; either in diſtinct mines, or intermingled with the ores of lead or other metals.

The matter, which copper imbibes from this mineral in its converſion into braſs, ſeparates again from the braſs on keeping it melted in an open veſſel, and exhales in fumes; which condenſe, upon ſuch adjacent bodies, as are leſs hot, into white flowers, the ſame with thoſe into which zinc is converted by fire. A mixture of calamine and powdered charcoal yields by itſelf, in open veſſels, or if the air is admitted, the ſame flowers: in cloſe veſſels, the zinc is revived, and either runs off, or ſublimes, in its proper metallic form, into that part of the veſſel which is moſt remote from the action of the fire. The quantity of zinc is variable, as of other metals in their ores: Marggraf informs us, in the Berlin memoirs, that ſome of the foreign calamines yielded two ſixteenths of their weight, an Engliſh calamine three ſixteenths, and another Engliſh ſpecimen from Holywell in Flintſhire, ſeven ſixteenths: from ſeveral parcels of the common calamine of the ſhops, I have gained nine ſixteenths. The moſt exact way of determining the quantity of zinc appears to be, by mixture with a pretty large proportion of copper; by which the zinc, reſolved into fume, is imbibed and detained.

This ore of zinc, employed principally for the making of braſs, is for that purpoſe roaſted or calcined; partly with a view to diſſipate ſome ſulphureous matter, which the crude mineral is ſuppoſed to contain; but chiefly to render it friable, and more eaſily reducible into fine powder. It is with the ore thus calcined, that the ſhops are generally ſupplied. The roaſted calamine is levigated into an impalpable powder.

Lap. calamin. præparatus *Pharm. Lond.*

In this ſtate it proves, for external purpoſes, an excellent reſtringent, deſiccative, and epulotic; of great uſe in collyria, againſt defluxions of thin acrid humours upon the eyes; and in unguents and cerates, for cutaneous ulcerations and excoriations. The officinal epulotic cerate, commonly called Turner's, is made by melting ſix ounces of yellow wax in a pint of oil olive, over a gentle fire, ſprinkling in ſix ounces of levigated calamine aſſoon as the mixture begins to grow ſtiff, and keeping the whole ſtirring till grown quite cold. The college of Edinburgh uſes only one part of the calamine to five parts of a cerate compoſed of oil, wax, and ſpermaceti.

Cerat. epulotic. *Ph. L.*

Cerat. e lapide calaminari *Ph. Edinb.*

CALAMINTHA.

CALAMINT: a plant with ſquare ſtalks: the leaves ſet in pairs; the flowers on branched pedicles, whereof two iſſue from one joint in the boſoms of the leaves: the upper lip of the flower is divided into two ſegments, the lower lip into three. It is perennial, and flowers in July and Auguſt.

1. Calamintha *Pharm. Lond.* *Calamintha pulegii odore ſeu nepeta C. B.* *Meliſſa nepeta Linn.* Calamint, field calamint: with reclining ſtalks; ſmall, irregularly oval leaves, very ſlightly indented, without pedicles; and the flower-ſtalks longer than the leaves. It grows wild in dry grounds, and by the ſides of fields.

This herb has a ſtrong aromatic ſmell, approaching to that of pennyroyal; and a moderately pungent taſte, ſomewhat like that of ſpearmint, but warmer. In virtue, it appears to be nearly ſimilar to a mixture of thoſe herbs: infuſions of the leaves are drank as tea, in weakneſſes of the ſtomach, flatulent colics, and uterine obſtructions.

Water extracts by infuſion nearly all the virtues of the calamint; and carries off, in evaporation, the whole of its ſpecific flavour. In diſtillation with water, there ſeparates from the aqueous fluid a conſiderable quantity of eſſential oil, of a very pungent taſte, and ſmelling ſtrongly of the herb. The remaining decoction, thus diveſted of the aromatic part of the plant, is unpleaſantly roughiſh, bitteriſh, and mucilaginous.

Rectified ſpirit extracts the virtues of the calamint more perfectly than water, and gains from it a deep green tincture. On gently diſtilling the filtered liquor, a part of the flavour of the herb riſes with the ſpirit, and a part remains behind in the inſpiſſated extract. Spirit manifeſtly brings over more from this plant than from ſpearmint, and leſs than from pennyroyal; its active matter being more volatile than that of the one, and leſs ſo than that of the other.

2. Calamintha montana *Pharm. Edinb.*(a) *Calamintha vulgaris vel officinarum germaniæ C. B.* *Meliſſa Calamintha Linn.* Common calamint, ſo called: with upright ſtalks; larger, ſhort, ſerrated, pointed leaves, ſet on pedicles; and the flower-ſtalks of the length of the leaves. It is found wild about the ſides of highways, but is leſs common, in this country, than the other.

The leaves of this ſpecies are in taſte weaker than thoſe of the preceding. Their ſmell is ſtrong, not like that of pennyroyal, but rather approaching to that of the wild mints, though more agreeable. The eſſential oils of the two plants differ in flavour as the herbs themſelves: in the ſpirituous extracts the difference is leſs conſiderable. They are ſuppoſed to agree in virtue, and have been uſed indiſcriminately; the ſhops being generally ſupplied with the ſpecies which is moſt eaſily procurable.

(a) Expunged.

3. Calamintha magno flore *Pharm. Pariſ. & C. B. Calamintha montana flore magno ex calyce longo J. B. Meliſſa grandiflora Linn.* Mountain calamint: with larger leaves and flowers than the two preceding, but ſmaller ſtalks; the leaves ſet on pedicles, pointed, acutely and deeply ſerrated like thoſe of nettles; the flower-ſtalks ſhorter than the leaves, and of the length of the flowers themſelves. It is a native of the ſouthern parts of Europe, and raiſed with us in gardens.

This ſpecies has a moderately pungent taſte, and a more agreeable aromatic ſmell than either of the other calamints. It appears to be the moſt eligible of the three as a ſtomachic.

CALAMUS.

CALAMUS AROMATICUS Pharm. Lond. Acorus verus, Calamus aromaticus Pharm. Edinb. & C. B. Acorus Calamus Linn. Calamus or sweet-scented flag: a plant with long, narrow, pointed leaves, like thoſe of the narrow iris, of a bright green colour, divided by the longitudinal rib into two unequal portions, one of which is ſmooth, the other tranſverſely wrinkled. The flowers are imperfect, and ſtand thick together, forming an elegant ſpike like the catkin of the hazel, which riſes in the boſom of one of the leaves about the middle of its height. The root, which ſpreads obliquely under the ſurface of the earth, is long, crooked, full of joints, about an inch thick, ſomewhat flatted; externally of a greeniſh white colour, which changes, in drying, into a browniſh yellow; internally white, and of a looſe fungous texture. This plant grows plentifully, in rivulets and marſhy places, about Norwich and in ſome other parts of this kindom, and, as is ſaid, in the canals of Holland: the flowers appear early in the ſummer, the leaves die in the winter, the roots are perennial. The ſhops have been uſually ſupplied from the Levant with dried roots, not ſuperiour, and ſcarcely equal, to thoſe of our own growth.

The roots of calamus have a moderately ſtrong aromatic ſmell, and a warm, pungent, bitteriſh taſte. Their flavour, when freſh, is unpleaſant, approaching in ſome degree to that of leeks or garlic: by drying, it is greatly improved, but does not become truly grateful. Some report them to be ſuperiour in aromatic flavour to any other vegetables produced in theſe northern climates; but the ſpecimens I examined fell ſhort, in this reſpect, of many of our common plants.

Infuſions of calamus in water ſmell ſtrongly of the root, and have a moderately warm and very bitter taſte: ſpirit, applied after water, receives no ſmell, and ſcarcely any taſte. Tinctures of the root in rectified ſpirit are warmer and more pungent than the watery infuſion, but much leſs bitter, and of very little ſmell: water, applied after ſpirit, gains a conſiderable bitterneſs, but no ſmell. It appears, therefore, that water is the moſt perfect menſtruum of the bitter matter, as rectified ſpirit is of the aromatic, and that the ſmell of the calamus is covered or ſuppreſſed by ſpirit. The tinctures in both menſtrua are of a yellow or brown colour, according as they are leſs or more ſaturated.

In diſtillation with water, there ariſes a ſmall quantity of eſſential oil, amounting only to about two ounces from ſixty-ſix pounds of the root*(a)*: both the oil and diſtilled water have a ſtrong ſmell, ſomewhat leſs grateful than that of the root in ſubſtance: the remaining decoction, thus deprived of the aromatic matter, is nauſeouſly bitter. On diſtilling the ſpirituous tincture, the diſtilled ſpirit has ſcarcely any ſmell or taſte of the calamus: the extract, nevertheleſs, has very little ſmell, and much leſs taſte than might have been expected in the extract of ſo warm a root.

Calamus aromaticus was formerly held in conſiderable eſteem as a warm ſtomachic; and was commonly made an ingredient in bitter tinctures and infuſions: among us, it has given place, in this intention, to bitters of a more grateful kind. The root, candied, is ſaid to be uſed at Conſtantinople as a preſervative againſt contagion.

CALENDULA.

CALENDULA Ph. Edinb.(b) Caltha vulgaris C. B. Calendula officinalis Linn. SINGLE MARIGOLD: a plant, with oblong undivided leaves, joined cloſe to the ſtalk, widening from thence to the extremity,

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(a) Hoffman, *Obſervat. phyſico-chym. lib.* i. *obſ.* 1.

(b) Expunged.

juicy, and ſomewhat clammy to the touch; and moderately large, bright yellow or gold coloured flowers, compoſed of a number of indented petals ſtanding round a middle diſk, on which, after the flower has fallen, ſeveral rough crooked ſeeds lie naked. It is annual, common in gardens, propagates itſelf by ſeeds, and flowers from May to the end of autumn.

Marigold flowers have been recommended as aperients in uterine obſtructions and icteric diſorders; as ſudorifics, alexipharmacs, and for promoting eruption in malignant and exanthematous fevers. They appear, from their ſenſible qualities, to be of little activity: when freſh, they have a faint unpleaſant ſmell, which is loſt in drying: their taſte is chiefly mucilaginous, with a ſlight bitteriſhneſs. They give a pale yellow tincture to water, and a deeper yellow to ſpirit: the watery infuſion has the moſt ſmell, and the ſpirituous the moſt taſte of the flowers. The extract obtained by inſpiſſating the ſpirituous tincture, is bitteriſh and ſlightly roughiſh: the watery extract is a tenacious mucilage, of leſs taſte than the other.

The leaves of the plant appear to be of greater virtue than the flowers. Chewed, they impreſs at firſt a viſcid ſweetneſs, which is followed by a penetrating pungency, very durable in the mouth, not of the hot or aromatic, but rather of the ſubſaline kind. Their expreſſed juice, which contains great part of the pungent matter of the herb, has been given, in doſes of two or three ounces or more, as an aperient; and is ſaid to looſen the belly, and promote the natural ſecretions in general.

CALX VIVA.

CALX VIVA Pharm. Lond. & Edinb. Quicklime: an acrimonious, friable ſubſtance; diſſolving, very readily, in the nitrous, marine, and vegetable acids; uniting with the vitriolic acid into an indiſſoluble and nearly inſipid concrete; producing heat on the affuſion of water, partly diſſolving in the water, and impregnating it with a ſtrong taſte.

Quicklime is prepared, about London, chiefly from chalk; in other parts of the kingdom, from different ſorts of ſtones called, from their uſe, limeſtones; by calcining them, in kilns made for this purpoſe, with a ſtrong fire. All the native mineral earths and ſtones, that diſſolve in acids, and all the ſea ſhells that have been tried, are reduced by fire

into

into quicklime; and ſuffer, in the calcination, a great diminution of their weight. If the lime be expoſed long to the atmoſphere, it falls by degrees into powder, increaſes in weight, loſes of its acrimony, and at laſt becomes ſimilar in quality to what the earth was before calcination: it retains its acrimony much longer in a moiſt than a dry ſtate.

The earths and ſtones, from which quicklime is produced, contain a large quantity of air, which in calcination is expelled: hence ſtrong quicklime raiſes no effervefcence, or emits no air-bubbles (which the crude earths do in great abundance) during its diſſolution in acids. A theory, which now begins to prevail, conſiders the proper calcareous matter as a ſubſtance, which is in its pure ſtate quicklime; which, by the ſimple coalition of air*(a) with it, loſes its acrimony, ſolubility in water, and other diſtinguiſhing characters; and which, on the bare ſeparation of this incorporated air, proves quicklime again (b). Thus much appears demonſtrated, that either the qualities of the calcareous matter are affected by the air itſelf imbibed or expelled, or that both (in all the experiments hitherto known) are equally affected by ſome other cauſe: in either caſe, the diſcovery is valuable in regard to practical utility; the calcareous earths and ſtones becoming quicklime by all thoſe means by which air is expelled from them, whether calcination by fire, or ſolution in acids and precipitation with ſubſtances void of air; and quicklime loſing its qualities by all thoſe means by which air is introduced, whether direct expoſure to the atmoſphere, or commixture with certain other bodies from which it inſtantaneouſly abſorbs the aereal matter.

Quicklime is employed for increaſing the activity of alkaline ſalts: if water, ſtrongly impregnated with the lime, be gradually added to a ſolution of fixt alkali, the calcareous matter ſeparates and ſubſides, ſatiated with air, and no longer acrid or diſſoluble in water; the alkali at the ſame time loſing its air, ſo as to make no effervefcence with acids, and proving in this ſtate much more acrid than at firſt. Quicklime is ſometimes uſed alſo in external applications as a depilatory; and has been ſometimes made into an unguent with honey for rheumatic and other

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*(a) Not atmoſpherical air, but the ſpecies of air termed *fixed* or *fixable.*

(b) See Dr. Black'*s Experiments on Magneſia, in the Edinburgh eſſays phyſical and literary, vol.* ii. *art.* 8. *and Dr.* Macbride'*s Experimental eſſays.*

obſtinate fixt pains of the joints or limbs: this unguent is greatly commended by Fuller, who obſerves that it is almoſt cauſtic.

Solutions of the calcareous matter in water are given internally with ſafety, and in many caſes with advantage. For this purpoſe, a gallon and a half of water is poured by degrees upon a pound of freſh burnt quicklime, the veſſel ſhaken when the ebullition ceaſes, and then ſet by till the undiſſolved lime has ſettled; after which, the liquor is poured off, and paſſed through a filter. In the laſt Edinburgh diſpenſatory, half a pound of lime is directed to be ſprinkled with four ounces of water in a cloſe veſſel, and when it is fallen to powder, twelve pounds more of water are to be added, and the whole agitated about ten times, keeping the veſſel ſtill cloſe; and the liquor then filtered. Only a ſmall portion of the lime is diſſolved by the water, and the remainder gives a ſtrong impregnation to large quantities of freſh water, though not ſo ſtrong as to the firſt; great part remaining at laſt undiſſolved: this reſiduum, calcined again, becomes quicklime as before: and by repetitions of this proceſs nearly the whole may be diſſolved.

Aqua calcis *Ph. Lond.*

Aqua calcis *Ph. Edinb.*

The ſolution has a ſtrong, ſtyptic kind of taſte. It changes the juices of blue flowers to a green colour; precipitates metallic bodies diſſolved in acids; tinges ſilver of a coppery hue; and turns red wine to a dark colour: by theſe properties, the ſtrength of its impregnation with the calcareous matter may be in ſome meaſure eſtimated. The ſpecific gravity of the liquor is increaſed by the lime, in a much greater ratio than the ſmall quantity taken up can effect by the appoſition of its own weight (a); on account, perhaps, of the water being deprived of its air. In veſſels quite filled with the lime-water, and exactly cloſed, it may be kept unchanged for many months: in open veſſels, the calcareous matter ſoon ſeparates from the aqueous fluid, and concretes upon the ſurface into a cruſt, inſipid and indiſſoluble as the earth in its natural ſtate, and again convertible into quicklime by a repetition of the calcination. As moſt kinds of liquids, and many other bodies, are impregnated, more or leſs, with the ſubſtance which lime greedily imbibes, and which renders it indiſſoluble; lime-water ſuffers a ſeparation of part of its lime in moſt mixtures, and probably alſo in the act of its diſſolving bodies: hence, when this liquor is employed as a menſtruum, it is adviſable to add ſome quicklime in ſubſtance, in order to continue the impregnation of the water with the lime.

(a) Whytt, *Edinb. eſſ. & obſ. phyſ. & lit. vol.* i. *art.* xiii. *p.* 383.

Lime-water diſſolves, by the aſſiſtance of heat, mineral ſulphur, vegetable oils and reſins, and animal fats: it extracts, in the cold, the virtues of ſundry reſinous and oily vegetables, and diſſolves thick phlegm or mucous matters, and the curd of milk; with which laſt it forms a white liquid, nearly ſimilar in its appearance to milk in its natural ſtate. It has lately been found to diſſolve alſo the human calculus, particularly the lime-water prepared from calcined oyſter-ſhells, which proves a more active menſtruum for this concrete (and poſſibly for other ſubſtances alſo) than that made from the ſtone limes; the diſſolving power of the oyſter-ſhell lime-water ſeeming, from Dr. Whytt's experiments, to be more than double to that of the ſtone lime-waters *(a)*. Taken internally, in conſiderable quantity, it impregnates the urine in ſome degree with its lithontriptic power, and in ſundry calculous caſes has happily given relief.

Lime-water, drank to the quantity of a quarter of a pint three or four times a day, has been found ſerviceable in ſcrophulous complaints, fluxes, ſeminal weakneſſes, and other diſorders proceeding from an impurity of the fluids, or laxity and debility of the ſolids. It generally promotes urine; oftentimes the cuticular diſcharge; and where the ſtomach is oppreſſed with viſcid phlegm, expectoration. It for the moſt part binds the belly, and ſometimes occaſions a troubleſome coſtiveneſs, unleſs this effect be occaſionally provided againſt by the interpoſition of proper laxatives. It anſwers beſt in cold, ſluggiſh, phlegmatic, and corpulent habits; and is to be uſed more cautiouſly in hot bilious diſpoſitions, and where the patient is greatly emaciated, or the appetite weak, and at the time of any critical or periodical evacuation.

It is cuſtomary to impregnate lime-water with different materials, partly for rendering it more acceptable to the palate and ſtomach, and partly for improving its medicinal efficacy againſt cutaneous defedations. The college of London directs, in this view, half an ounce of ſaſſafras bark and one ounce of liquorice†, with the addition, in ſome caſes, of four ounces of raſped guaiacum wood and three drams of coriander ſeeds;

Aqua calcis † minus compoſita *Ph. Lond.*

(a) Edinb. medical eſſays, vol. v. *art.* 69. See on this ſubject his *Treatiſe on the virtues of lime-water.*

ſeeds‡; to be macerated for four days in three quarts of lime-water, and the liquor ſtrained off for uſe. Theſe infuſions are taken in the ſame quantities as the ſimple lime-water, by themſelves, or with the addition of milk.

‡ magis compoſita Ph. Lond.

CAMPHORA.

CAMPHORA Pharm. Lond. & Edinb. Caphura. CAMPHOR: a ſolid concrete, ſomewhat unctuous to the touch: totally volatile in the heat of boiling water, and ſubliming unaltered: melting in a leſs degree of heat into the appearance of oil; readily taking fire on a red-hot iron, and burning entirely away, with a bright white flame, and copious fumes, which condenſing form ſoot; ſoluble in ſpirit of wine, and in oils, and in the nitrous and vitriolic acids, not in water, nor in vegetable acids. From the nitrous acid, diluted with a little water, it abſorbs the ſtronger acid matter, and forms therewith a ſubſtance like oil, which floats on the ſurface of the more phlegmatic liquor: with the vitriolic, it mingles uniformly into a yellowiſh red fluid.

Camphor is extracted, by a proceſs ſimilar to that by which eſſential oils are obtained, from the wood and roots of a large tree of the bay kind, growing in Japan, called by Linnæus *Laurus (camphora) foliis trinerviis lanceolato-ovatis: nervis ſupra baſin unitis.* A ſpecies of camphor is ſometimes likewiſe found naturally concreted into little grains, in the medullary part of this and ſome other trees: I have in my poſſeſſion a piece of a reddiſh wood, which ſeems to be part of the trunk of a large tree, and which on being ſplit in different places exhibits camphor plentifully concreted in it.

* In the *Adverſaria* of the learned Gaubius, is an account tranſmitted by a correſpondent, of the production of camphor in the iſland of Sumatra, which is worthy of notice. There are, it ſeems, only two kinds of camphor known in commerce in the Eaſt Indies, the Sumatran and Japaneſe. The former is ſo much ſuperior to the latter, that the Japaneſe themſelves readily give a hundred pounds of their own, for one pound of the Sumatran. The reaſon of this probably is, both that the climate of Sumatra is much warmer, and that the camphor there is entirely prepared by nature. In the northern parts of this iſland the camphor tree grows to ſuch a ſize, that planks two feet in breadth are ſawn out

of its trunk. After it has ſtood for a certain number of years, its branches naturally crack, and an oily liquor exudes from the fiſſures. When the inhabitants obſerve this, they collect the oil in pieces of bamboo, and watch the time when they have learned by experience that the formation of the camphor is complete. They then, after ſome ſuperſtitious ceremonies, cut down the tree, and ſplitting the branches, which are found full of camphor, pick out the pieces, making ſeparate parcels of the large and the ſmall ones. They conclude with raſping the wood itſelf; and thus make three ſorts of camphor, which they bring to the Dutch factory; ſelling, however, all three together by weight. The largeſt and fineſt pieces are called, in the Malay language, *Copal*, or head; the ſmaller, *Poeroet*, or belly; and the raſpings of the wood, *Cacki*, or feet*(a).

As firſt ſublimed or diſtilled from the wood, it appears browniſh, and compoſed of ſemipellucid grains mixed with ſome impure matter. In this ſtate, it is imported by the Dutch, and purified by a ſecond ſublimation, by which it becomes clear and white: this laſt proceſs is ſo managed, that the head of the ſubliming glaſs is kept warm enough, to make the camphor run together into a maſs of its own figure; in which form it is brought into the ſhops. It may likewiſe be purified by ſolution in ſpirit of wine; recovered from the ſpirit by diſtillation, the ſpirit riſing before the camphor; and afterwards formed into loaves by fuſion, with a gentle heat, in a cloſe veſſel.

This concrete has a fragrant ſmell, ſomewhat approaching to that of roſemary, but much ſtronger; and a bitteriſh, aromatic, pungent taſte, accompanied with an impreſſion of coolneſs. It is looked upon as one of the principal diaphoretics and antiſeptics, and as poſſeſſing ſome degree of an anodyne or antiſpaſmodic power. It is apparently of great ſubtility and penetration, quickly diffuſing itſelf through the habit in a very ſenſible manner: taken in any conſiderable quantity, it generally produces very uneaſy ſenſations about the ſtomach and præcordia, and often in the remoter parts; though it does not heat the body near ſo much, as might be expected from the great pungency of its taſte.

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*(a) The editor has been favoured with an account of the camphor tree, ſent from Sumatra, which agrees perfectly with the above. The writer further ſays, that the Sumatran camphor tree is certainly a new genus, and not at all reſembling the tribe of *Lauri*.

Hoffman reports, that doſes even of half a dram did not increaſe the pulſe, or excite any immoderate heat, but occaſioned rather a ſenſe of coolneſs; and that on continuing the uſe of the camphor for ſome time, the blood became more fluid, and the quantity of watery ſerum, which the habit before abounded with, was notably diminiſhed.

*A remarkable account of the effects of camphor in a large doſe on the relator himſelf, Mr. Alexander, ſurgeon, in Edinburgh, is contained in the *Philoſophical Tranſactions, vol.* lvii. *part* 1. After taking one ſcruple of this medicine, he found his pulſe ſomewhat abated in frequency, but no other change in himſelf is remarked. He next took two ſcruples; the firſt effect of which was to ſink the pulſe from 77 to 70. In leſs than half an hour it returned to its former number; and at this time a giddineſs came on, which gradually increaſed, till all conſciouſneſs of preſent, and memory of paſt, objects was obliterated. Violent efforts to vomit, with ſtrong convulſions and a temporary mania, ſucceeded. The pulſe was now raiſed to 100. Some degree of recollection returned; accompanied with a ſenſation of violent heat, and tremors of the whole body. The exhibition of warm water now cauſed a rejection of great part of the camphor; and from this time its effects by degrees wore off. A great ſoreneſs and rigidity of the whole body were felt the next day and the day following. A ſimilar account is related in a theſis *de viribus camphoræ* by Dr. Griffin, printed at Edinburgh in 1765.

In acute diſeaſes, this medicine is given from a quarter of a grain to one or two grains, and ſometimes more, in conjunction commonly with nitre, or other ſubſtances of the anti-inflammatory ſaline kind. Hoffman obſerves *(a)*, that it anſwers beſt on the approach of a criſis, or in the decline: that it is to be uſed with caution during the increaſe, and when the fever is at the height, more eſpecially where the internal heat is great, moiſture deficient, and the ſkin dry: and that it is ſparingly to be given alſo when nature is weak; where a tumidneſs and redneſs of the face, with vertiginous complaints, torpor, and ſleepineſs, ſhew the veſſels of the head to be diſtended; as alſo in palſies, convulſions, and in plethoric and coſtive habits.

(a) Diſſ. de uſu camphoræ ſecuriſſimo & præſtantiſſimo; & Med. rational. de febrib. paſſim.

In chronical diſorders proceeding from a redundance of ſerous defluxions, or from an impurity of the humours, and as an aſſiſtant to mercurial alteratives, it is uſed more freely, and with leſs danger: in ſome caſes a little opium is joined, which prevents the uneaſineſs which camphor of itſelf is apt to produce, and at the ſame time increaſes its operation by ſweat, a mixture of camphor and opium being one of the moſt potent ſudorifics. Some recommend camphor to be given in maniacal caſes, to the quantity of half a dram every night or oftener; and inſtances have been produced*(a)* of this practice being attended with ſucceſs.

It has been generally ſuppoſed that this concrete corrects the irritating power of cantharides; and Hoffman looks upon it as a corrector alſo of the ſtimulating cathartics and emetics. It apparently corrects, in a conſiderable degree, the more active mercurial preparations; that is, it determines their operation to the cuticular emunctories, and by promoting their diaphoretic, reſtrains their purgative or emetic virtue: but how far it varies the action of cantharides, and the ſtimulants, purgatives, and emetics of the vegetable kingdom, is not as yet certainly known.

Julepum e camphora *Ph. Lond.*

Camphor may be diſſolved in watery liquors, and thus fitted for being commodiouſly taken, by grinding it with ſugar, almonds, or thick mucilages, and adding the water by degrees. A dram of camphor, rubbed with a few drops of rectified ſpirit of wine till it grows ſoft, requires about four drams of fine ſugar: a pint of boiling water is poured on this mixture, the veſſel cloſely covered, and the liquor, when grown cold, ſtrained out for uſe. Vinegar alſo, by this treatment, diſſolves the camphor equally with water, and is often preferred in acute diſeaſes, whether putrid or inflammatory, as rendering the julep ſomewhat more grateful both to the palate and ſtomach, and excellently coinciding with the medicinal intention. The whole of the camphor, however, is not diſſolved by either; a part, and generally a conſiderable one, remaining behind upon the ſtrainer. Almonds or mucilages render it completely diſſoluble into an emulſion or milky form. The above quantity of camphor requires about twelve almonds; to which mixture a pint of ſome ſuitable aqueous fluid, as the diſtilled water of pennyroyal, is commonly added, and half an ounce of fine ſugar diſſolved in the ſtrained liquor. In this

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(a) Philoſophical Tranſactions, n. 400. *Suenſka vetenſkaps acad. handl. tom.* v. *ann.* 1744.

form, vinegar or other acids can have no place, as they coagulate the emulſion, or at leaſt render it incapable of keeping the camphor diſſolved: but nitre may be added in any quantity that may be thought proper, this neutral ſalt mingling uniformly with the liquor, and producing no ſeparation of its parts. Emulſions made with mucilages admit both nitre and acids.

Spiritus vini camphoratus *Ph. Lond.* & *Edinb.*

A ſolution of camphor in rectified ſpirit of wine, in the proportion of an ounce to a pint, is employed externally againſt rheumatic pains and paralytic numbneſſes, for diſcuſſing tumours and inflammations, and reſtraining the progreſs of gangrenes. On diluting this ſolution with watery liquors, the mixture becomes milky, and on ſtanding for ſome time greateſt part of the camphor ſeparates. It has been ſaid, that with the ſpirit of ſal ammoniac made by quicklime, and with ſaturated alkaline lixivia, it mingles without ſeparation: but, on trial, it turned milky with the former, in the ſame manner as with water; and with the latter it did not mingle at all, the camphorated ſpirit ſwimming diſtinct upon the ſurface of the alkaline lye. It has been reported alſo, that a camphorated ſpirit, uniformly miſcible with water, may be obtained, by grinding the camphor with ſomewhat more than equal its weight of fixt alkaline ſalt, then adding a proper quantity of proof ſpirit, and drawing off one half by diſtillation. This ſpirit, however, does not anſwer expectation: the quantity of camphor that riſes with it is exceeding ſmall, greateſt part remaining behind in the diſtilling veſſel: hence, though when the ſpirit is mixed with a large quantity of water, it occaſions no ſenſible turbidneſs, yet when mixed with only a little water, it exhibits the ſame appearances as the common ſolution, differing no otherwiſe than in degree.

Ung. album camphorat. *Ph. Lond.*

Ol. camphorat. *Ph. Edin.*

Camphor is uſed alſo in unguents, for burns, itchings, and ſerpiginous eruptions on the ſkin: for theſe purpoſes, a dram and a half of camphor, firſt ground with a few drops of oil, are mixed with a pound and a half of the white ointment. It is mixed in a larger proportion, with cataplaſms for the throat againſt inflammations of the uvula and tonſils; and diſſolved, for rheumatic and other pains, in oil of olives, in the proportion of one part of camphor, to four of the oil. Hoffman reports, that a ſolution of camphor, in empyreumatic vegetable oils that have been rectified by diſtillation from quicklime, procures immediate relief in ſome kinds of violent pains (a).

(a) *In notis ad Poterium, p.* 483.

CANCRORUM CHELÆ.

CHELÆ CANCRORUM Pharm. Lond. Crabs claws: the black tips of the claws of the *cancer marinus* or common ſea crab.

Chelæ canc. præparatæ *Ph. Lond.*

This teſtaceous matter, levigated into an impalpable powder, is made uſe of for abſorbing acidities in the firſt paſſages, and makes the baſis of the compound abſorbent powders of the ſhops: to four parts of the prepared claws, the college of London joins one part of prepared red coral and one of pearl. All theſe three ingredients conſiſt of the ſame *calcareous animal earth:* how far any of them is ſuperiour, as a medicine, to the others, or any compoſition of them to any one of the three ſeparately, does not appear. The diſtinguiſhing characters of this kind of earth are, its being convertible, by calcination with a ſtrong fire, into quicklime; its not perfectly vitrefying with a moderate proportion of vitreous fluxes, but rendering the flux or glaſs opake and white; its being diſſoluble in all acids except the vitriolic, and precipitable by this laſt from the others.

Pulv. e chelis cancr. comp. *Ph. Lond.*

CANCRORUM OCULI.

CANCRORUM OCULI dicti Pharm. Lond. & Edinb. Cancrorum lapides. Crabs-eyes ſo called: ſtony concretions, found in the head, or rather ſtomach, of the *aſtacus fluviatilis* or river craw fiſh; generally about the ſize of peas, or larger; of a roundiſh ſhape, flatted on one ſide; in colour white, ſometimes with a reddiſh, and ſometimes with a blueiſh caſt; internally of a leafy texture. They are ſaid to be brought to us chiefly from Holland: perhaps the greateſt quantities are the produce of Muſcovy, particularly of the river Don, where the craw fiſh, as I have been informed, are extremely plentiful, and have been commonly laid in heaps to putrefy, after which the ſtones are picked out.

Theſe ſtones are ſaid to be ſometimes counterfeited with tobacco-pipe clay, or chalk mixed with glutinous materials. Compoſitions of this kind may be readily diſtinguiſhed from the genuine crabs-eye, by their texture being uniform and not leafy, and by their ſticking to the tongue, and being ſoftened with water. They differ alſo in their habitude to acids; either not diſſolving at all, or diſſolving in another manner.

If genuine crabs-eyes be put entire into ſtrong vinegar, or into aqua fortis largely diluted with water; their earthy part is gradually extracted, and there remains a ſoft tranſparent gelatinous ſubſtance, of the ſame figure with the original concrete: ſuch as were at firſt coloured, retain their colour after the action of the acid. The quantity of this gelatinous matter is much leſs than might be judged from the volume which it occupies; amounting, when the nitrous acid has been uſed, ſcarcely to one tenth part of the weight of the crabs-eyes: vinegar leaves a larger quantity, a part of the earth itſelf ſeeming to eſcape the action of this acid.

Crabs-eyes are uſed as an abſorbent of acid humours, and are ſuppoſed, when combined with the acid, to be more aperient and reſolvent than moſt of the other abſorbent earths: in this intention they are commended by Hoffman, who looks upon a ſolution of them in vinegar as capable of reſolving both ſtagnant thick humours and coagulated blood. * They have lately been employed, by an eminent phyſician at Leyden, with great ſucceſs, in the cure of the fluor albus. He gives to the quantity of half an ounce in a day; and remarks, that it is particularly ſerviceable in that ſpecies of the diſeaſe in which the diſcharge is ſo acrimonious as to corrode the parts *(a)*. Their earth differs remarkably from that of the preceding article, in not being convertible into quicklime; but the medical differences of their ſolutions in vinegar, or in other acids of the vegetable or animal kingdom, do not appear to be very great, the ſolutions of the two earths being in taſte nearly alike. The earth of crabs-eyes, in regard to its chemical characters, is of the ſame nature with that of hartſhorn.

CANELLA.

CANELLA ALBA Pharm. Lond. & Edinb. Canella alba & Coſtus corticoſus Ph. Pariſ. Cinamomum ſive canella tubis minoribus alba C. B. Winterania Canella Linn. CANELLA ALBA: the inner bark of a large bay-leaved tree, growing in the low lands of Jamaica and other American iſlands: brought over in the form of quills; of which ſome are large and thick, taken from the trunk of the tree; others ſlender and thinner, from the branches; having generally pieces of a wrinkled browniſh coat adhering to the outſide; lined on the inſide with a fine white membrane; breaking over with a cloſe even ſurface, and appearing internally of an unequal, pale, browniſh or yellowiſh white colour.

(a) *Med. comment. vol.* I. *p.* 325.

Canella alba has hitherto been rarely employed in medicine, unleſs as a ſubſtitute for winter's bark, which it pretty much reſembles, and has been commonly miſtaken for. The London college has now received it in two officinal compoſitions, for alleviating the ill flavour of aloes; and the Edinburgh, in their Tinctura Amara. It is a moderately warm aromatic; of an agreeable ſmell, ſomewhat reſembling that of cloves, but far weaker; and of a pungent taſte, accompanied with a conſiderable bitteriſhneſs.

Infuſions of it in water are of a yellowiſh colour, and ſmell moderately of the canella, but in taſte are rather bitter than aromatic. Tinctures made in rectified ſpirit are of a darker reddiſh yellow colour, and have more of the aromatic warmth of the bark, but very little of its ſmell. Tinctures in proof ſpirit are more agreeable than either; this menſtruum diſſolving the aromatic as well as the bitter matter of the canella, without covering or ſuppreſſing its flavour like the pure ſpirit.

In diſtillation with water, it yields an eſſential oil, of a dark yellowiſh colour, of a thick tenacious conſiſtence, difficultly ſeparable from the aqueous fluid, in ſmell ſufficiently grateful, though rather leſs ſo than the bark itſelf: the remaining decoction, inſpiſſated, leaves an extract of great bitterneſs, in conſiſtence not uniform, ſeemingly compoſed of a reſinous and gummy matter imperfectly mixed. On inſpiſſating the ſpirituous tincture, the ſpirit, which diſtils, has no great ſmell or taſte of the canella, but is ſo far impregnated with its more volatile oil as to turn milky on the admixture of water: the remaining extract retains the bitterneſs of the bark, but has little more of its warmth or flavour than the extract made with water.

CANNABIS.

CANNABIS Pharm. Edinb. (a) & *C. B. Cannabis ſativa Linn.* Hemp: a tall annual herb, with digitated leaves, cultivated in fields on account of the mechanic uſes of its tough rind. Some of the plants, called male, produce flowers; compoſed of yellowiſh ſtamina ſet in five-leaved cups. Others, called female, produce ſeeds; moderately large, covered with a ſhining dark grey-coloured ſhell; under which is lodged a white kernel.

(a) Expunged.

This plant has a rank ſmell, of the narcotic kind, and is ſuppoſed to be prejudicial to health. It is ſaid that the effluvia of the freſh herb weaken the eyes, and affect the head *(a)*: and that the water, in which the herb has been ſteeped for facilitating the ſeparation of the tough rind, is a violent and ſudden poiſon *(b)*. The deleterious power of this liquor may depend, however, not ſolely on the ſpecific virtues of the hemp, but in great part on the ſtrong putrid taint which the ſoluble matter of the herb contracts during the proceſs: for flax, a plant not ſuſpected of any hurtful qualities, is reckoned to give a like poiſonous impregnation to the water in which it is long macerated; inſomuch that the ſteeping of one, as well as of the other, in ſpring or running waters, or ponds in which cattle drink, is prohibited by law *(b)*. The leaves of an oriental hemp, called *bangue* or *bang*, and by the Egyptians *aſſis*, are ſaid to be uſed, in the eaſtern countries, as a narcotic, and aphrodiſiac *(c)*.

The ſeeds of hemp, when freſh, have a faint ſmell of the herb, which is diſſipated in keeping: their taſte is unctuous and ſomewhat ſweetiſh, accompanied with a ſlight warmth. They yield upon expreſſion a conſiderable quantity of inſipid oil; and unite with water, by trituration, into an emulſion. Decoctions of them in milk, and the emulſions, have been recommended againſt coughs, heat of urine, *&c.* in which caſes they may be of ſervice, as emollients and obtunders of acrimony: but the virtues attributed to them againſt incontinence of urine, and for reſtraining venereal appetites, appear to have leſs, if any foundation. They are ſaid to be uſed in ſome places as food; and, when taken freely, to affect the head *(d)*.

(a) Lindeſtolpe, *De venenis, edit. Stentzel. cap.* x. *theſ.* xiii. *p.* 541.

(b) Ray, *Hiſt. plant.* i. 159.

(c) Kæmpfer, *Amænitates exot. p.* 645. Alpinus, *De med. Ægypt. lib.* iv. *cap.* 2.

(d) Ray, *Hiſt. plant. p.* 158.

CANTHARIDES.

CANTHARIDES Pharm. Lond. & Edinb. CANTHARIDES or SPANISH FLIES: an inſect of the beetle kind, *(Meloe veſicatorius Linn.)* generally about half an inch in length; on the upper ſide, of a ſhining green colour, variegated with more or leſs of a blue and a gold yellow; on the lower ſide, browniſh. Theſe inſects are frequent in Spain, Italy, and the ſouthern parts of France: they are collected from herbs and buſhes, killed by the ſteam of ſtrong vinegar, and afterwards dried in the ſun. The largeſt and beſt are ſaid to come from Italy. They ſhould be choſen freſh coloured, entire, and free from duſt: on long keeping, they are apt to loſe of their colour, and become powdery, and in this ſtate are to be rejected.

CANTHARIDES have little or no ſmell, unleſs the quantity is large; in which caſe they yield a faint diſagreeable one, Cautiouſly taſted, they impreſs a ſlight ſenſe of acrimony: thoſe who deſcribe the taſte as highly acrimonious and cauſtic, have probably judged, not from the direct ſenſation of taſte, but from the conſequential effects. Applied to the ſkin, they firſt inflame, and afterwards excoriate the part; raiſing a more perfect bliſter, and producing a more plentiful diſcharge of ſerum, than any of the vegetable acrids. Hence their common uſe as a veſicatory.

Veſicatories are employed, either as a general ſtimulus, for raiſing the pulſe and quickening the circulation, in low fevers, and in lethargic diſorders; or for reſolving topical obſtructions. Fixt pains, whether external or internal, as in the rheumatiſm, ſciatica, dyſentery, pleuriſies and peripneumonies, are frequently obſerved to yield to a bliſter upon the part; though frequently alſo the matter is lodged ſo deep, as to be beyond the reach of this as well as of other external medicines. Bliſters are likewiſe applied to the head in epileptic and maniacal diſorders, inveterate and periodic headachs, and obſtinate defluxions on the eyes, in which caſes they are not to be conſidered merely as topical remedies: Hoffman relates, that in defluxions on the eyes, he has known a bliſter, applied to the nape of the neck, increaſe the pain; whilſt one laid on the ſoles of the feet has procured relief as ſoon as the diſcharge from its operation began to take place. Bliſters on the head give the leaſt pain; on the legs the moſt.

The bliſtering applications are generally compoſed of cantharides reduced into fine powder and mixed with plaſters or other compoſitions of a due conſiſtence. Three ounces of the powder are ſtirred into three ounces each of hogs lard, yellow wax, and white reſin, melted together[†]; or into ſix ounces of the drawing plaſter with the addition of a quarter of a pint of vinegar[‡]. This laſt ingredient is ſuppoſed to promote or facilitate the action of the cantharides: for in ſome caſes, where the plaſter without vinegar has failed of taking effect, on removing it and waſhing the part with vinegar, the ſame plaſter, applied again, has bliſtered freely: it is probable, however, that this was owing, not ſo much to any peculiar quality of the vinegar, as to its ſoftening and deterging the ſkin; an effect which is not to be expected from it when mixed with the other ingredients of the plaſter. Other ſtimulating ingredients are ſometimes added, as pepper, muſtard-ſeed, and verdigris; but it does not appear that theſe kinds of ſubſtances give any material aſſiſtance to the action of cantharides. The powdered flies ſpread on the ſurface of a common plaſter operate as effectually as any of the compoſitions, and in this form they are often uſed.

Emplaſt. veſicatorium

[†] *Ph. Edinb.*

[‡] *Ph. Lond.*

In ſome caſes, as in variolous eruptions or other inequalities of the ſkin, compoſitions of a ſofter conſiſtence than plaſters are required, that they may apply themſelves to the depreſſed parts: for theſe purpoſes, equal quantities of finely powdered cantharides and wheat flour are mixed with vinegar into a paſte. Where bliſters are intended to be made perpetual, or continued, as a conſtant drain of ſerous humours, for a conſiderable time, ſome cantharides are added occaſionally in the dreſſings, to keep the ulcers open: ointments for this intention are prepared in the ſhops, by melting together equal parts of the bliſtering-plaſter and hogs lard, and keeping them ſtirring together till grown cold; or by melting ſeven parts of yellow baſilicon, and then adding one part of powdered cantharides.

Epithema veſicatorium *Ph. Lond.*

Ung. ad veſicatoria *Ph. Lond.*

Ung. epiſpaſ. e pulvere Cantharidum *Ph. Edinb.*

Cantharides are applied alſo, in ſmaller quantity, ſufficient to warm and ſtimulate the part conſiderably, but not to raiſe a bliſter, againſt ſome rheumatic pains, chilblains, and paralytic affections. In this intention, the bliſtering compoſitions are diluted with other plaſters, in ſuch proportion, that the quantity of the fly may be about one twenty-ſixth part of the whole compound.

Emp. calidum *Noſocom. Edinb.*

The external uſe of cantharides, if the quantity be conſiderable, is often followed by a ſtrangury and heat of urine; this inſect being peculiarly diſpoſed to affect the urinary organs, though applied to the remoteſt parts. This inconvenience is prevented or remedied, by emulſions or mucilaginous liquors plentifully drank.

Small doſes of cantharides are given internally in ſuppreſſions of urine, and for deterging ulcerations of the bladder. They have likewiſe been found remarkably ſerviceable in ſeminal weakneſſes and old gleets; in which the balſamic medicines, generally recommended, are often ineffectual *(a)*. In leprous caſes alſo they have frequently had excellent effects, in virtue perhaps of their diuretic power; for ſo great is the conſent of the kidneys with the ſkin, that the humours accumulated in the cutaneous glands may be diſcharged by urine; as the urinary liquor, when the kidneys fail in their office, ſometimes tranſpires through the ſkin *(b)*.

Great caution is requiſite in the uſe of this highly ſtimulating medicine; a ſmall exceſs in the doſe producing not only a ſtrangury, but a diſcharge of blood, with intenſe pains about the neck of the bladder: a grain, and even a quarter of a grain *(c)*, has in ſome caſes had this effect. The remedy for theſe ſymptoms, in good habits, and where the cantharides have not been greatly overdoſed, conſiſts in plentiful dilution with emollient liquors in which ſome nitre has been diſſolved, with the interpoſition of moderate doſes of opium. It is commonly ſuppoſed that camphor, given along with the fly, corrects in ſome degree its irritating power.

Cantharides, digeſted in rectified ſpirit, impart to it a bright yellow tincture, and have their own colour improved: boiling water receives from them a muddy yellowiſh or browniſh hue, and conſiderably impairs the colour of the fly. The active matter of the cantharides is completely taken up by both menſtrua, and does not riſe with either in diſtillation or evaporation: the ſubſtance of the fly remaining after digeſtion either in water or in ſpirit, does not in the leaſt bliſter or inflame the ſkin; whereas both the watery and ſpirituous extracts bliſter freely.

(a) Mead, *Monita & præcepta, p.* 256.

(b) Idem, *Medica ſacra, p.* 24.

(c) Hermann, *Cynoſura, m. m. pars* ii. *Edit. Boecler. p.* 56.

The ſafeſt and moſt commodious form for taking cantharides internally, is the ſpirituous tincture; which, dropt into watery or vinous liquors, mingles uniformly, without precipitation or turbidneſs. Two drams of the cantharides, bruiſed a little, are commonly digeſted two or four days in a pint and a half or two pints of proof ſpirit, with or without the addition of half a dram or more of cochineal as a colouring ingredient. Theſe tinctures are uſually given from fifteen to thirty or more drops twice a day: the moſt certain method of obtaining, without danger, the full effect of the cantharides, is, to begin with the ſmaller doſe, and increaſe it by two or three drops at a time, till a little uneaſineſs is perceived in making water; after which, the medicine being intermitted for a day or two, the doſe is to be diminiſhed a little, and continued juſt below the quantity which produced that effect.

Tinct. canth. *Ph. Lond.* *Ph. Edinb.*

A ſoft extract of cantharides is in many caſes preferable, for external purpoſes, to the ointments and plaſters made with the powdered fly, particularly for the dreſſing of perpetual bliſters; as it acts more uniformly than the compoſitions containing the fly in ſubſtance, and occaſions leſs pain in the dreſſing. Hoffman's *mild bliſter which gives little pain*, mentioned now and then in his works, ſeems to have been, or to have had for its baſis, a preparation of this kind; and probably the empyrical *perpetual bliſter* is no other. The college of Edinburgh have now received a compoſition on the ſame principle: they direct an ounce of cantharides to be infuſed for a night in four ounces of boiling water, the liquor to be ſtrongly preſſed and ſtrained out, and boiled with two ounces of hogs lard till the humidity is waſted; after which, an ounce of white reſin, an ounce of yellow wax, and two ounces of Venice turpentine, are to be added, and the whole well mixed ſo as to form a ſmooth ointment.

Unguentum epiſpaſticum ex infuſo cantharidum *Ph. Edinb.*

CARANNA.

CARANNA Pharm. Edinb.(a) CARANNA: a concrete reſinous juice; exuding from a large tree, of which we have no particular account; brought from New Spain, and ſome other parts of America, in little maſſes, rolled up in leaves of flags; externally of a dark browniſh colour, internally brown with a caſt of red, variegated with irregular white ſtreaks; ſomewhat ſoft and tenacious as it firſt comes over, but in length of time growing dry and friable.

(a) Expunged.

THIS juice has an agreeable ſmell, eſpecially when heated, and a bitteriſh and ſlightly pungent taſte. Water diſſolves about one fourth of it, and rectified ſpirit above three fourths: what is left by the one menſtruum diſſolves in the other, a ſmall quantity of impurities excepted: both ſolutions are of a bright yellow colour, the ſpirituous deepeſt.

The watery tincture ſmells agreeably of the caranna, and is in taſte bitteriſh and ſomewhat warm. In diſtillation with water, there ſeparates from the aqueous fluid a conſiderable quantity of an orange-coloured eſſential oil, of a very fragrant ſmell, and a moderately pungent taſte: the remaining decoction, inſpiſſated, leaves an extract of an ungrateful, though weak, bitteriſhneſs.

The ſpirituous tincture is both in ſmell and taſte ſtronger and more agreeable than the watery. Inſpiſſated, it yields a very tenacious adheſive reſin, with an oily matter which ſeparates and floats on the ſurface: the reſin has very little ſmell, and ſcarcely makes any impreſſion on the organs of taſte: the oil is conſiderably aromatic, and moderately bitter, in which laſt reſpect it differs from the purer oil obtained by diſtillation with water.

Caranna has been chiefly employed as an ingredient in vulnerary balſams, corroborant and diſcutient plaſters, and other external applications. It has very ſeldom been given internally, and is now, in this country, almoſt wholly in diſuſe.

*CARDAMINE.

CARDAMINE Pharm. Edinb. Naſturtium pratenſe magno flore C. B. *Cardamine pratenſis Linn.* LADIES-SMOCK or CUCKOW FLOWER: a plant, of the claſs *tetradynamia* of Linnæus, in taſte reſembling creſs. It has an erect ſtalk; and leaves ſet in pairs on a middle rib, with an odd one at the end. Its flower is white or purpliſh, and is ſucceeded by a bivalvular pod. It grows plentifully in moiſt meadows, and flowers early in the ſpring.

The virtue of the flowers of ladies-ſmock, in hyſteric and epileptic caſes, was firſt noticed by Ray; and their uſe has been revived by Sir George Baker, who has publiſhed ſome caſes of their efficacy in the *Medical Tranſactions, vol.* 1. The flowers are given in powder, in doſes of from thirty to ninety grains. They have little ſenſible effect, ſit eaſy on the ſtomach, and increaſe the appetite. Their antiſpaſmodic powers ſeem, from the caſes related, to be conſiderable.

CARDAMOMUM.

CARDAMOM: a dried fruit or pod, brought from the Eaſt Indies; divided internally into three cells, in each of which are contained two rows of triangular ſeeds, of a browniſh colour on the outſide and white within.

1. CARDAMOMUM MINUS *Pharm. Lond. & Edinb. Cardamomum ſimpliciter in officinis dictum C. B.* Cardamom, leſſer cardamom: with ſhort triangular huſks, ſcarce half an inch in length; the produce of a plant with reed-like ſtalks, deſcribed in the *Hortus malabaricus* under the name of *Elettari*; the *Amomum Cardamomum* of Linnæus.

Theſe ſeeds, freed from the huſks, are an elegant and uſeful aromatic, of a grateful ſmell and flavour, very warm, yet not fiery, or ſubject, like the ſpices of the pepper kind, to produce immoderate heat. The huſks ſhould be ſeparated only at the time of uſe; for the ſeeds ſoon loſe a part of their flavour in being kept without this defence.

Their virtue is extracted, not only by rectified ſpirit, but almoſt completely by water alſo; with this difference, that the watery infuſion is cloudy or turbid, the ſpirituous clear and tranſparent: the colour of both is a pale yellow. Scarcely any of the aromatic ſeeds give out ſo much of their warmth to watery menſtrua, or abound ſo much with gummy matter, which appears to be the principle by which the aromatic part is made diſſoluble in water: the infuſion is ſo mucilaginous, even in a dilute ſtate, as hardly to paſs through a filter.

In diſtillation with water, a conſiderable quantity of eſſential oil ſeparates from the watery fluid, of a pale yellowiſh colour, in ſmell exactly reſembling the cardamoms, and of a very pungent taſte: the remaining decoction is diſagreeably bitteriſh and mucilaginous, retaining nothing of the pungency or warmth, any more than of the peculiar flavour of the ſpice. On inſpiſſating the tincture made in rectified ſpirit, a part of the flavour of the cardamoms ariſes with the ſpirit, but greateſt part remains behind concentrated in the extract; which ſmells moderately of the ſeeds, and has a pungent aromatic taſte, very durable in the mouth, and rather more grateful than that of the ſeeds in ſubſtance.

Tinctures of this ſpice both in rectified and proof ſpirit are more agreeable than the watery infuſions; and proof ſpirit, impregnated with its flavour by diſtillation, more agreeable than the ſimple diſtilled water. A tincture of ſix ounces of the ſeeds, in a quart † or two pints and a half ‡ of proof ſpirit; and a ſpirituous water more lightly flavoured with them, by drawing off a gallon of proof ſpirit from four ounces; are kept in the ſhops, and occaſionally made uſe of as pleaſant warm cordials and for flavouring other medicines. I have not obſerved any of the aromatics to anſwer, in general, ſo well as the tincture of this ſpice, for rendering mineral waters and other ſaline liquors acceptable to the ſtomach.

Tinct. cardamomi
† *Ph. Lond.*
‡ *Ph. Edinb.*
Aq. ſemin. cardam.
Ph. Lond.

2. Cardamomum medium *Pharm. Pariſ. Cardamomum majus officinarum C. B.* Greater cardamom: with thicker and tougher huſks, an inch or more in length; the produce of a plant of the ſame kind with the preceding, but larger. There is ſome confuſion in regard to the name, that of *cardamomum majus* being applied among us to this ſpecies, and in France to the *grana paradiſi*, of which hereafter.

The ſeeds of the greater cardamom are allowed by the faculty of Paris to be uſed indifferently with thoſe of the leſſer: the large kind, however, is much weaker than the other, both in ſmell and taſte, and hence has in this country been long diſregarded, and is now become a ſtranger to the ſhops. Both ſorts are nearly of the ſame nature, the difference being chiefly in degree.

CARDIACA.

CARDIACA ſeu Agripalma Pharm. Pariſ. Marrubium cardiaca dictum C. B. Leonurus Cardiaca Linn. MOTHERWORT: a large plant, with ſquare branched ſtalks, the leaves ſet in pairs on long pedicles at the joints, and the flowers in cluſters round the upper joints: the leaf is dark coloured, cut deeply into three ſharp-pointed indented ſegments, of which the middle one is longeſt, and the two lateral ones commonly again deeply cut: the flower is purpliſh, labiated, with the upper lip long and arched, the lower ſhort and cut into three ſections. It is biennial, grows wild in waſte grounds, and flowers in July.

THIS plant is ſaid to be uſeful in diſorders of the ſtomach proceeding from thick phlegm; to looſen the belly; to promote perſpiration, urine, and the uterine purgations. Such, in effect, are the virtues, which may be expected from its ſenſible qualities. The leaves and the tops have a moderately ſtrong ſmell, not very agreeable; and a very bitter taſte. In keeping for ſome time, or on boiling them in water, their ſmell is diſſipated: the decoction, inſpiſſated to the conſiſtence of an extract, diſcovers to the taſte a ſtrong penetrating ſubſaline bitterneſs.

CARDUUS.

CARDUUS BENEDICTUS Pharm. Lond. & Edinb. Cnicus ſilveſtris hirſutior ſive carduus benedictus C. B. Centaurea benedicta Linn. HOLY THISTLE: a plant with rough, narrow, jagged leaves, terminating in ſoft prickles; and large, hairy, branched ſtalks, leaning to the ground; on the tops of which grow large, ſcaly, prickly heads, including a number of yellow floſculi, which are followed by oblong ſtriated ſeeds incloſed in down. It is a native of Spain and ſome of the iſlands of the Archipelago, and ſown annually with us in gardens.

THE leaves of carduus have a penetrating bitter taſte, not very ſtrong, or very durable in the mouth; accompanied, in their recent ſtate, with ſomewhat of an ungrateful flavour, which they ſoon loſe in keeping. The herb, when thoroughly dried, ſhould be hung up looſely in an airy place; being very ſubject, if preſſed cloſe, to rot or grow mouldy.

Cold water, poured on the dry leaves, extracts, in an hour or two, a light grateful bitterneſs: by ſtanding long upon the plant, the liquor becomes diſagreeable: a ſtrong decoction is very nauſeous and offenſive to the ſtomach. A cold infuſion and a decoction being ſeparately inſpiſſated, the ſame differences were obſerved between the extracts, as between the liquors in their dilute ſtate; the extract obtained from the infuſion being a ſufficiently agreeable bitter, and that from the decoction diſguſtful; a proof, that the differences of the liquors do not depend, as might be ſuppoſed, on their degree of ſaturation, but on their being impregnated with matters of a different kind.

Rectified ſpirit alſo extracts, in a ſhort time, the lighter bitter part of the carduus, but does not take up the nauſeous near ſo eaſily as water: a ſpirituous tincture prepared by warm digeſtion for ſeveral hours, and the extract obtained by inſpiſſating it, were more ſtrongly but not unpleaſantly bitter. The colour of the watery tinctures is a yellowiſh or greeniſh, inclining more or leſs to brown, according as they are more or leſs ſaturated; that of the ſpirituous, a deep green.

On keeping the ſoft watery extracts for ſome months, a conſiderable quantity of ſaline matter was found to have ſhot upon the ſurface, into ſmall cryſtals, in ſhape approaching to thoſe of nitre, in taſte bitteriſh with an impreſſion of coolneſs.

The virtues of this plant ſeem to be little attended to in the preſent practice. The nauſeous decoction is ſometimes uſed to excite vomiting, and a ſtrong infuſion to promote the operation of other emetics: but this elegant bitter, when extracted from the offenſive parts of the herb, may be advantageouſly applied to other purpoſes. I have frequently obſerved excellent effects from a light infuſion of carduus, in weakneſs of appetite and indigeſtion, where the ſtomach was injured by irregularities and oppreſſed by viſcid phlegm: nor have I found any one medicine of the bitter kind to ſit ſo eaſily on weak ſtomachs, or to heat ſo little. Theſe infuſions, taken freely, promote the natural ſecretions. Drank warm in bed, they commonly increaſe perſpiration or excite ſweat; and as they act with great mildneſs, not heating or irritating conſiderably, they have been uſed, in this intention, in acute as well as chronical diſeaſes.

The ſeeds of carduus are likewiſe conſiderably bitter, and have ſometimes been uſed as ſudorifics or diaphoretics, in the form of emulſion. Cartheuſer obſerves, that they give the proper conſiſtence of an emulſion to ten times their weight or more of water: and that they do not impart a perfect whiteneſs, but a greyiſh colour to the liquor.

CARICÆ.

CARICÆ Pharm. Lond. & Edinb. Figs: the dried fruit of the *ficus communis C. B. Ficus Carica Linn.* a tree of a middling ſize, with large leaves cut into five ſegments; remarkable for producing no flowers previous to the fruit; growing ſpontaneouſly in the warmer climates, and cultivated in our gardens.

Figs are accounted moderately nutrimental, grateful to the ſtomach, and eaſier of digeſtion than any of the other ſweet fruits. Their principal medicinal uſe is as a lubricating emollient ſweet; in which intention, they are commonly made an ingredient in pectoral decoctions, and in lenitive electaries. They are employed externally, in cataplaſms, for promoting the ſuppuration of inflammatory tumours; for which purpoſe they appear to be equally adapted with other ſoft ſubſtances void of acrimony or irritation.

CARLINA.

CARLINA: a perennial plant, with long, narrow, deeply jagged, and very prickly leaves, lying on the ground; in the middle of which grows a large roundiſh head, without any ſtalk, encompaſſed with ſmaller leaves, full of ſharp prickles: the flower iſſues from the middle of the head.

1. Carlina *ſive Chamæleon albus Pharm. Edinb.(a) Carlina acaulos magno flore C. B. Carlina acaulis Linn. Cardopatium.* Carline thistle: with the flower compoſed of a number of white petals ſet round a middle diſk. It is a native of the mountainous parts of Italy and Germany, from whence the dried roots are ſometimes brought to us. Theſe are about an inch thick, externally of a ruſty or reddiſh brown colour, internally of a pale yellowiſh or browniſh, corroded as it were upon the ſurface, and perforated with ſmall holes, ſo as to appear, when cut, as if worm-eaten.

The roots of carline thiſtle have a moderately ſtrong, not agreeable ſmell; and a weak, bitteriſh, ſubacrid, ſomewhat aromatic taſte. In-

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(a) Expunged.

fuſions of them in water have very little taſte, and not much ſmell: diſtilled with water, they yield a two-hundredth part of their weight, or a little more, of a thick ponderous eſſential oil, which, on being rectified or rediſtilled, leaves a conſiderable proportion of reſinous matter and becomes thin*(a)*: the decoction, remaining after the ſeparation of this moſt active principle of the root, is unpleaſantly bitteriſh and ſubſaline, though only weakly ſo even when inſpiſſated to an extract. A tincture and extract prepared with rectified ſpirit are ſtronger in taſte than thoſe made with water, but have little ſmell. Both the watery infuſion and extract are of a browniſh yellow colour, the ſpirituous of a deep gold yellow.

This root is ſuppoſed to be diaphoretic, antihyſteric, and anthelmintic. It has been greatly eſteemed by ſome foreign phyſicians in acute malignant as well as in chronical diſeaſes; and given in ſubſtance from a ſcruple to a dram, and in infuſion from one to two drams and more. It never came much into uſe among us, and is now rarely to be met with in the ſhops. Frederic Hoffman the elder relates, that he has known a decoction of it in broth excite vomiting*(b)*, but does not mention the quantity which produced this effect.

2. CARLINA GUMMIFERA; *Carduus pinea*; *Ixine*. *Carlina acaulos gummifera C. B.* *Chamæleo albus dioſcoridis Columnæ*. *Atractylis gummifera Linn.* PINE THISTLE: with the flowers compoſed of purpliſh floſculi, like thoſe of the common thiſtle. It is a native of Italy and the iſland of Candy.

THE roots of the pine thiſtle are larger than thoſe of the carline, and of a ſtronger ſmell. Wounded when freſh, they yield a viſcous milky juice, which concretes into tenacious maſſes, at firſt whitiſh and reſembling wax, when much handled growing black, ſuppoſed to be the *ixion*, *ixia*, and *acanthina maſtiche* of the ancients. The juice, in taſte and ſmell not ungrateful, is ſaid to have been formerly chewed for the ſame purpoſes as maſtich; and the root itſelf to be of the ſame virtue with that of the preceding ſpecies.

(a) Neumann, *Chem. works*, p. 406.

(b) *Clavis Schræder.* p. 431.

CARPO-

CARPOBALSAMUM.

CARPOBALSAMUM Pharm. Lond. The fruit of the tree that yields the balſam of Gilead. It is about the ſize of a ſmall pea, with a ſhort pedicle; of a roundiſh or oval figure, pointed at the top; compoſed of a dark brown or reddiſh black, wrinkled bark, marked with four ribs from top to bottom, and a whitiſh or yellowiſh medullary ſubſtance *(a)*.

This fruit, when in perfection, is ſaid to have a pleaſant warm, bitteriſh taſte, and a fragrant ſmell reſembling that of the balſam itſelf. But ſuch as is now and then met with in the ſhops, (for it is but rarely to be met with there) has almoſt wholly loſt both its ſmell and taſte. It is no otherwiſe made uſe of in this country than as an ingredient in mithridate and theriaca; in both which, its place is commonly ſupplied by materials of more efficacy than itſelf: ſome direct juniper berries, the London college cubebs, for its ſubſtitute.

CARTHAMUS.

CARTHAMUS Pharm. Pariſ. Cnicus ſativus ſive carthamus officinarum C. B. Carthamus tinctorius Linn. Safflower: a plant with oval pointed leaves, ſomewhat prickly about the edges, joined cloſe to the ſtalk, which is round, firm and branched: on the tops grow large ſcaly heads, with ſaffron-coloured fiſtular flowers ſtanding out from them: theſe are followed by ſmooth white ſeeds, of an oblong roundiſh ſhape, yet with four ſenſible corners, remarkably heavy ſo as to ſink in water. It is an annual plant, a native of Egypt, and cultivated in large quantity in ſome parts of Germany on account of the uſes of its flowers in dying. It is ſometimes raiſed among ourſelves; but the ſeeds, which are the part that has been chiefly made uſe of in medicine, ſeldom come to perfection in this climate.

The ſeeds of carthamus, freed from the ſhells, have an unctuous ſweetiſh taſte, which on chewing them for a little time becomes acrid

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(a) *Vide* Proſp. Alpin. *Dialog. de balſamo.*

and diſagreeable: they form an emulſion on trituration with water, and give out to ſpirit a little nauſeous acrid matter. They have been celebrated as a gentle cathartic, in doſes of a dram or two in ſubſtance and ſix or eight drams in emulſion: but as they operate very ſlowly, and are apt, eſpecially when given in ſubſtance, to occaſion nauſeæ, flatulencies, and diſtenſions of the ſtomach; their uſe has long been laid aſide, and the colleges both of London and Edinburgh have now diſcarded them from their catalogues of officinals.

The flowers have been ſometimes employed as a colouring drug for alimentary and medicinal ſubſtances; and when well cured, are not eaſily diſtinguiſhable by the eye from ſaffron, though they have nothing of its ſmell or taſte. They give a deep ſaffron tincture to rectified ſpirit, and a paler yellow to water. After the yellow matter has been extracted by water, the flower appears red, and communicates a deep red colour to ſpirit of wine or to alkaline lye.

CARUI.

CARUI Pharm. Lond. Carvi Pharm. Edinb. Cuminum pratenſe carui officinarum C. B. Carum Carvi Linn. CARAWAY: an umbelliferous plant, with ſtriated branched ſtalks, two or three feet high; and finely divided leaves ſet in pairs along a channelled rib; every two of which ribs or pedicles croſs one another at their origin on the ſtalk: the ſeeds are ſmall, of a browniſh or blackiſh colour, ſomewhat bent, ſtriated, flat on one ſide, convex on the other. It is a native of the northern climates: in this kingdom it is rarely found wild, but commonly cultivated in gardens for culinary and confectionary as well as medicinal purpoſes. It is biennial.

CARAWAY ſeeds are an uſeful ſtomachic and carminative; of a ſufficiently agreeable aromatic ſmell, and a moderately warm taſte: they are given, in ſubſtance, from a ſcruple to a dram. The leaves have the ſame kind of flavour with the ſeeds, but are conſiderably weaker and leſs grateful. The roots have a ſweetiſh taſte, accompanied with a ſlight warmth, and very little ſmell.

The ſeeds give out the whole of their virtue, by moderate digeſtion, to rectified ſpirit; for after the action of this menſtruum they prove inſipid and inodorous: the tincture taſtes ſtrongly of the caraways, but their ſmell is in great meaſure covered by the menſtruum. The ſpirit, gently diſtilled off from the filtered liquor, brings over very little of the flavour of the caraways, leaving nearly all their active matter concentrated in the extract, which proves a very warm pungent aromatic. The colour, both of the tincture and extract, is a yellowiſh verging to green.

Infuſions of the ſeeds in water are ſtronger in ſmell than the ſpirituous tincture, but much weaker in taſte: after repeated infuſion in freſh portions of water, they ſtill give a conſiderable taſte to ſpirit. The colour of the watery infuſions is a pale reddiſh brown. In diſtillation or evaporation, water elevates all the aromatic part of the caraways: the remaining extract is almoſt inſipid, and thus diſcovers, that in caraways there is leſs, than in moſt of the other warm ſeeds of European growth, of a bitteriſh or ungrateful matter joined to the aromatic. Along with the aqueous fluid there ariſes in diſtillation a very conſiderable quantity, about one ounce from thirty, of eſſential oil, of a bright yellow colour, Ol. eſſent. ſem. carui *Ph. Lond.* ſmelling ſtrongly of the caraway, in taſte hotter and more pungent than thoſe obtained from moſt of our other warm ſeeds*(a): this oil is given from one to five or ſix drops, as a carminative; and is ſuppoſed alſo to be of peculiar efficacy for promoting urine, to which it communicates ſome degree of its ſmell. The leaves of the plant afford likewiſe an oil, nearly ſimilar, both in colour and quality, to that of the ſeeds, but in far leſs quantity: ſixteen pounds of the herb in flower, ſtripped from the ſtalks, yielded ſcarcely an ounce. The eſſential oil of the ſeeds is directed as an officinal; as alſo a cordial water, pretty ſtrongly flavoured Aqua ſemin. carui † *Ph. Lond.* ‡ *Ph. Edinb.* with them by drawing off a gallon † or nine pints ‡ of proof ſpirit from half a pound of the caraways.

CARYOPHYLLA.

CARYOPHYLLA AROMATICA Pharm. Lond. & Edinb. Caryophyllus aromaticus ſeu potius garyophyllus Pharm. Pariſ. CLOVES: the unripe fruit, or perhaps more properly the cups of the unopened flowers, of a bay-like tree growing in the Eaſt Indies; *Caryophyllus aromaticus*

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*(a) M. Beaumé obtained from ſix pounds of unbruiſed caraway ſeeds, four ounces of eſſential oil, as colourleſs as water.

maticus Linn. In ſhape they ſomewhat reſemble a ſhort thick ſquare nail, of a ruſty colour inclining to black: in the inſide of each clove are found a ſtylus, and ſtamina, with their apices: at the larger end ſhoot out, from the four angles, four little points like a ſtar; in the middle of which is a round ball, of a lighter colour than the reſt, compoſed of four ſmall ſcales or leaves, which ſeem to be the unexpanded petala of the flower. The tree is one of thoſe, whoſe flower is produced above the rudiments of the fruit: the ripe fruit, ſometimes brought into Europe under the name of *anthophyllus*, is marked on the top with the remains of the flower; it is about the ſize and ſhape of an olive, and contains, under a thin blackiſh ſhell, a hard kernel of the ſame colour, which has a deep longitudinal ſeam on one ſide. The cloves are ſaid to be cured by expoſing them to ſmoke, and afterwards drying them in the ſun.

The clove has a ſtrong agreeable ſmell, and a bitteriſh, hot, very pungent taſte: it is one of the hotteſt and moſt acrid of the ſubſtances of the aromatic claſs, and as ſuch is often uſed, not only internally, but as an external ſtimulant. The antophyllus has the ſame kind of flavour with the clove itſelf; but being far weaker, in ſmell as well as in taſte, it is very rarely applied to any medicinal purpoſes, and is now ſcarcely ever to be met with in the ſhops.

The clove is remarkably diſpoſed to imbibe humidity; and when robbed of its active parts by infuſion in menſtrua or diſtillation, and afterwards mixed with freſh cloves, it regains from them a conſiderable ſhare both of taſte and ſmell. The Dutch, through whoſe hands this ſpice is brought to us, have often practiſed this abuſe; which, however, may be eaſily diſcovered; for thoſe cloves which have once loſt their virtue, continue always not only weaker than the reſt, but likewiſe of a much paler colour.

Tinctures of cloves in rectified ſpirit are of a dark reddiſh brown colour, of no great ſmell, but of a highly acrid taſte: if the quantity of ſpirit be conſiderable, it leaves the clove deprived of all its virtue. On inſpiſſating the filtered tincture, the ſpirit, which diſtils, is found to have very little impregnation from the ſpice: the remaining extract, nevertheleſs, does not diſcover ſo much ſmell as the clove in ſubſtance, but its taſte is exceſſively pungent and fiery. The quantity of this burning extract amounts to about one third the weight of the clove.

Digeſted or infuſed in water, they impregnate the liquor more ſtrongly with their ſmell than they do ſpirit, but not near ſo much with their taſte: after repeated infuſion in water, they impart ſtill a conſiderable tincture to rectified ſpirit. In diſtillation with water, they give over, very ſlowly, near one ſixth their weight (a) of eſſential oil; when carefully diſtilled, colourleſs; by age, changing to a yellow, and at length to a reddiſh brown colour; when drawn with a ſtrong fire, proving often of this colour at firſt; ſmelling ſtrongly of the cloves; but in taſte only moderately pungent, very much leſs ſo than the ſpirituous extract. Neither the remaining clove nor decoction have any conſiderable taſte; the pungency of this ſpice ſeeming to depend, not on the volatile or fixt parts ſeparately, but on the combination of the two (b).

The oil of cloves commonly met with in the ſhops, and received from the Dutch, is indeed highly acrimonious: but this oil is plainly not the genuine diſtilled oil of the clove; for notwithſtanding its being more pungent than that which cloves afford by the common proceſs of diſtillation, it contains a large admixture, oftentimes half its weight or more, of an inſipid expreſſed oil; as appears upon treating it with rectified ſpirit, which diſſolves the pungent aromatic matter, and leaves the groſs inſipid oil. It is probably from an admixture of the reſinous part of the clove, that this ſophiſticated oil receives both its acrimony and high colour. Freſh cloves are ſaid to yield a high coloured, thick, fragrant oil upon expreſſion: poſſibly the common oil of cloves, brought from the ſpice iſlands, is no other than this oil, diluted with inſipid ones. The college of London ſeems to require both the common and the genuine oil to be kept in the ſhops, making *eſſential oil of cloves* both an article of the materia medica and an officinal preparation: perhaps the common oil, as being moſt pungent, is beſt adapted for ſome external purpoſes, as the genuine doubtleſs is for thoſe of an internal aromatic.

CARYOPHYLLATA.

CARYOPHYLLATA Pharm. Edinb. (c) *Caryophyllata vulgaris C.B. Geum urbanum Linn.* AVENS, or HERB-BENIT: a roughiſh plant, with dark-coloured winged leaves, reſembling thoſe of agrimony; and pentapetalous yellow flowers, ſtanding in ten-leaved cups on the tops of the branches, followed, each, by a round cluſter of hairy ſeeds with hooked tails: the roots are ſlender, full of fibres, of a dark browniſh colour on the outſide, and reddiſh within. It is perennial, grows wild in woods and hedges, and is found in flower greateſt part of the ſummer.

(a) Hoffmann, *Obſervationes phyſico-chymicæ, lib.* i. *obſ.* 3.

(b) Neumann, *De caryoph. aromat. Chem. works, p.* 413. Cartheuſer, *m. m.* ii. 383.

(c) Expunged.

The root of avens has been employed as a gentle ſtyptic, corroborant, and ſtomachic; and for theſe intentions continues, not undeſervedly, of ſome eſteem in foreign countries, though very little regarded among us. It has a mildly auſtere ſomewhat aromatic taſte; and a very pleaſant ſmell, ſomewhat of the clove kind, eſpecially in the ſpring, and when produced in dry warm ſoils: ſuch as is the growth of cloſe, ſhady, moiſt places, has little and often nothing of this flavour.

This root gives out its aſtringent matter equally to watery and ſpirituous menſtrua, its aromatic part moſt perfectly to the latter: the aqueous infuſion is of a reddiſh brown colour, the ſpirituous of a deep yellow. In diſtillation with water, it yield a ſmall quantity of a whitiſh concrete oily matter, of a very grateful fragrance: the remaining decoction, inſpiſſated to the conſiſtence of an extract, is moderately aſtringent. On committing to diſtillation the ſpirituous tincture, little or nothing comes over with the ſpirit; the aromatic part of the root, as well as the auſtere, remaining concentrated in the extract. The ſmell, which in the tincture is concealed or ſuppreſſed by the menſtruum, diſcovers itſelf again when the ſpirit is drawn off.

CARYOPHYLLUS RUBER.

CARYOPHYLLA RUBRA Pharm. Lond. & Edinb. Caryophyllus altilis major C. B. Dianthus Caryophyllus Linn. CLOVE-JULY-FLOWER, or GILLIFLOWER: a plant with many ſmooth round jointed ſtalks, and graſs-like blueiſh-green leaves ſtanding in pairs at the joints: the flower is compoſed of five petals, narrow at the baſes, broad and jagged at top, ſet in an oblong cylindrical cup, which is covered at bottom with four ſhort ſcales forming as it were a ſecondary cup: after the flower has fallen, the cup becomes a covering to a number of ſmall, flat, wrinkled, black ſeeds. It is perennial, and ſaid to be a native of Italy.

Many ſpecies or varieties of theſe flowers are common in our gardens. Thoſe employed for medicinal uſes, to which the name of clove-july-flower is more particularly appropriated, are of a deep crimſon colour, and a pleaſant aromatic ſmell ſomewhat akin to that of the clove ſpice: their taſte is bitteriſh and ſubaſtringent. In drying, their taſte becomes ſtronger, and their ſmell is not ſo ſoon diſſipated as that of many other fragrant flowers.

Clove-july-flowers have been recommended as cardiacs and alexipharmacs. Simon Paulli relates, that he has often cured malignant fevers by the uſe of a decoction of them; which, he ſays, powerfully promotes ſweat and urine without greatly irritating nature, and at the ſame time raiſes the ſpirits, and abates thirſt.

Syr. caryoph. rubrorum

At preſent, theſe flowers are valued chiefly for their fine flavour; which is readily extracted by infuſion in water, and diſſipated even by light coction. Three pounds of the freſh flowers clipt from the heels, communicate, by infuſion in a cloſe veſſel for a night, a grateful and moderately ſtrong ſmell, and a deep red colour, to five† and even to twelve‡ pints of water: theſe liquors, with a proper quantity of fine ſugar, form very agreeable ſyrups. On diſtilling the freſh flowers with water, the diſtilled liquor proves conſiderably impregnated with their fragrance, but no eſſential oil ſeparates, though ſeveral pounds of the flowers be ſubmitted to the operation. The remaining decoction is of a deep red colour, and yields, upon being inſpiſſated, a dark purpliſh red extract, of little or no ſmell, and of a bitteriſh, auſtere, ſubſaline taſte.

† *Ph. Lond.*

‡ *Ph. Edinb.*

Rectified ſpirit, digeſted on the flowers, receives a much paler tincture than watery liquors, but extracts the whole of their active matter. In diſtillation or evaporation, ſpirit elevates much leſs than water; the ſpirituous extract retaining a conſiderable ſhare of the fine ſmell of the flowers, as well as their taſte: its colour is purpliſh, like that of the watery extract.

CASIA CARYOPHYLLATA.

CASIA CARYOPHYLLATA Pharm. Pariſ. Cortex caryophylloides. Clove bark: the bark of a tree of the clove kind, (*caryophyllus aromaticus fructu rotundo, caryophyllon plinii C. B. Myrtus caryophyllata*

phyllata Linn.) brought from the iſland Cuba, Jamaica, and other parts of the Weſt Indies; rolled up in quills; like cinnamon, but ſomewhat thinner, rougher on the outſide, and of a darker ruſty brown colour.

This bark is a warm aromatic, nearly of the ſame kind of ſmell and taſte with the clove ſpice, but weaker, and with a little admixture as it were of the cinnamon flavour. It agrees nearly with cloves alſo in regard to the ſolubility and volatility of its active principles. Tinctures of it in rectified ſpirit ſmell and taſte ſtrongly of the bark: the watery infuſions are conſiderably impregnated with its ſmell, but have very little of its taſte. On inſpiſſating the ſpirituous tincture, the ſpirit which diſtils has little or nothing of its flavour: the remaining extract ſmells lightly of the bark, and proves in taſte very hot and pungent, though much leſs ſo than the ſpirituous extract of cloves. In diſtillation with water, it yields a very ſmall portion of eſſential oil, nearly ſimilar in flavour to the oil of cloves, but more pungent than the genuine oil of that ſpice: the remaining decoction is ungratefully auſtere and bitteriſh.

A bark of the ſame kind is ſometimes brought from the Eaſt Indies under the name of *culitlawan* or *culilawan*; a Malaccan compound word, of which the Latin *cortex caryophylloides* or clove bark is ſaid to be a tranſlation. That diſtinguiſhed in Europe by the name of *culilawan* is thicker than the other, and in colour approaches ſomewhat more to cinnamon, but ſcarcely differs in ſmell or taſte.

The ſame with this appears likewiſe to be the *carabaccium* of Baglivi; which he deſcribes as being in taſte like cloves, but very temperate and grateful, and in colour having a great reſemblance to cinnamon; and which, he ſays, he made uſe of, with great benefit in decoction, for correcting acrimony and ſcorbutic diſſolution of the lymph, and for ſtrengthening the ſtomach and promoting digeſtion *(a)*.

Rumphius obſerves, that the outer and inner barks, and the barks of different parts of the tree, differ ſomewhat in colour and in taſte from one another; (whence, probably, ſuch differences as may have been obſerved in thoſe brought under different names into Europe); and that

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(a) Baglivi, *Experimenta circa ſalivam, Opp. p.* 426.

the bark of the root approaches both in appearance and in flavour to ſaſſafras, to which it was, in Batavia, frequently ſubſtituted.

CASIA FISTULARIS.

CASIA FISTULARIS Pharm. Lond. Caſſia fiſtularis Ph. Edinb. CASIA FISTULA: a hard woody cylindrical pod, of a tree reſembling the walnut, *(caſſia fiſtula alexandrina C. B. & Linn.)* which grows ſpontaneouſly in Egypt and the warmer parts of the Eaſt Indies, and has been thence introduced into the Weſt. The pods or canes are about an inch in diameter, and a foot or more in length; externally, of a dark brown colour, ſomewhat wrinkled, with a large ſeam running the whole length upon one ſide, and another leſs viſible on the oppoſite one; internally, of a pale yellowiſh colour, divided by thin tranſverſe woody plates into a number of little cells, containing each a flattiſh oval ſeed with a ſoft black pulp.

THE pulp of caſia has a ſweetiſh taſte, followed by more or leſs of an ungrateful kind of acrimony. The caſia of the Eaſt Indies has a more agreeable ſweetneſs, and leſs acrimony than that of the Weſt; and hence the former is univerſally preferred: they may be diſtinguiſhed from one another by the eye; the oriental canes being ſmaller, ſmoother, and thinner-rinded, and their pulp of a deeper ſhining black colour, than the occidental. The lighter canes of either ſort, and thoſe in which the ſeeds rattle on being ſhaken, are generally rejected: in theſe, indeed, the pulp has become dry, but it does not neceſſarily follow that it is damaged: it loſes nothing in drying but its aqueous humidity, and by this loſs it ſhould ſeem to be effectually ſecured from growing mouldy or ſour, inconveniences to which in its moiſt ſtate it is very ſubject.

The pulp of caſia, whether moiſt or dry, diſſolves both in water and in rectified ſpirit; readily in the former, ſlowly and difficultly in the latter, and not totally in either: the part which remains undiſſolved appears to be of little or no activity. It is uſually extracted by boiling the bruiſed pods in water, and evaporating the ſtrained ſolution to a due conſiſtence: the exhaling vapour carries off nothing conſiderable of the caſia. As it is very apt to grow ſour in keeping, only ſmall quantities ſhould be prepared at a time.

Caſia,

Caſia, in doſes of a few drams, is a gentle laxative; of good uſe in coſtive habits, in inflammatory caſes where purgatives of the more acrid or irritating kind can have no place, and, as Geoffroy obſerves, in the painful tenſion of the belly which ſometimes follows the imprudent uſe of antimonials. It is rarely given in ſuch doſes as to have the full effect of a cathartic; the quantity neceſſary for this purpoſe, an ounce and a half or two ounces, being apt to nauſeate the ſtomach, and produce flatulencies and gripes, eſpecially if the caſia is not of a very good kind: mild aromatics, and dilution with warm liquors, are the beſt correctives.

It is ſometimes acuated with the ſtronger purgatives, or with the antimonial emetics; of which laſt it is ſaid by ſome to diminiſh the activity ſo far, that four grains and a half of the tartarum emeticum may be taken, in a decoction of caſia, by thoſe who can bear but one grain and a half of the antimonial preparation by itſelf *(a)*. It is often joined alſo as an auxiliary to the milder purgatives, as cryſtals of tartar, tamarinds, and manna; and of theſe, particularly of the latter, it is ſuppoſed to increaſe the cathartic virtue: a mixture of four drams of caſia, and one and a half or two of manna, is ſaid, by Valliſneri, to purge as much as twelve drams of caſia or thirty-two of manna by themſelves. * In the ſhops are kept electaries of this kind, compoſed of ſix ounces each of pulp of caſia and ſyrup of pale roſes; and two ounces †, or one and a half ‡ of manna; with one ounce †, or one and a half ‡ of pulp of tamarinds.

Elect. e Caſia
† *Ph. Lond.*
‡ *Ph. Edinb.*

It is obſervable, that during the uſe of caſia, the urine appears frequently of a green colour, and ſometimes, where the quantities taken are conſiderable, of a dark brown or blackiſh.

CASIA LIGNEA.

CASIA LIGNEA Pharm. Edinb. & Pariſ. CASIA LIGNEA: the bark of a tree of the cinnamon kind, *(cinnamomum ſeu canella malavarica & javenenſis C. B. Laurus Caſſia Linn.)* brought from the Eaſt Indies **(b)*; exactly reſembling cinnamon in appearance, but diſtinguiſhable

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(a) Malouin, *Chimie medicinale, part.* iii. *chap.* 38.

**(b)* Bergius in his *Mat. Med.* gives the *Laurus Malabatrum* as the tree producing the caſſia lignea brought from the Eaſt Indies, and the *Laurus Caſſia* as the Weſt India cinnamon or caſſia, which he ſays is ſtronger than the former.

tinguiſhable by its breaking ſhort or ſmooth, while cinnamon breaks fibrous or ſhivery like wood.

This bark reſembles cinnamon in aromatic flavour as well as in external appearance; but differs in being weaker, or containing leſs active matter, and in its abounding with a viſcous mucilaginous ſubſtance. Chewed, it diſſolves as it were in the mouth into a kind of ſlime: powdered and boiled in water, it renders a conſiderable quantity of the fluid thick and glutinous, ſo as to concrete on cooling into the conſiſtence of a gelly.

Rectified ſpirit of wine, digeſted on the bark, diſſolves and extracts its aromatic matter; the powder retaining its mucilage, ſo as to form a gelly with water as at firſt. The aromatic part may be ſeparated alſo by diſtillation with water; in which proceſs, if a large quantity of caſia is uſed, a ſmall portion of eſſential oil may be collected. * M. Beaumé procured two drams and a half of oil, from twelve pounds and a half of caſia. The ſpicy principle of the caſia, thus freed from the mucilage, in the form of ſpirituous tincture, or ſpirituous extract, or diſtilled water, or eſſential oil, appears the ſame with that of cinnamon; provided, in regard to the diſtilled fluids, that they have not received an empyreumatic taint in the operation, an inconvenience to which they are very ſubject on account of the mucilaginous matter ſwelling up and burning to the veſſel. * The Edinburgh college have now directed a ſimple water to be kept, ten pints of which are drawn from a pound and a half of caſſia lignea.

Aq. Caſſiæ ligneæ *Ph. Edinb.*

Caſia lignea was employed by the ancients as a ſuccedaneum to cinnamon, of which it was reckoned equivalent to half its own quantity. At preſent, it is not unfrequently mixed with, or ſubſtituted to, that ſpice in the ſhops, but is ſcarcely ever made uſe of under its own name.

CASTOREUM.

CASTOREUM Pharm. Lond. & Edinb. Castor: the inguinal glands of the *caſtor* or beaver; a four-footed amphibious animal, frequent in ſeveral parts of Europe, and in North America. Theſe glands are of different ſhapes and ſizes, covered with a thick ſkin, including an unctuous liquid matter, which in keeping grows dry and hard: on cutting the dry cods, as they are called, they are found full of a brittle friable ſubſtance, of a browniſh red colour, interſperſed with fine membranes and fibres exquiſitely interwoven. The beſt caſtor comes from Ruſſia in large, round, hard cods; an inferior ſort, ſmaller and moiſter, from Dantzick; the worſt of all from New England, in longiſh thin cods.

Russia caſtor has a ſtrong not agreeable ſmell, and a biting bitteriſh nauſeous taſte: the other ſorts are weaker than that of Ruſſia, yet more ungrateful. It is generally looked upon as one of the capital nervine, antiſpaſmodic and antihyſteric medicines: its virtues have undoubtedly been much exaggerated; but though they are not near ſo great as they have by moſt writers been repreſented, they appear nevertheleſs to be conſiderable. The common doſe is from two or three grains to a ſcruple; though it has been ſometimes taken by drams, and theſe doſes very often repeated (a).

Rectified ſpirit, proof ſpirit, and water, extract, by the aſſiſtance of heat, nearly all the active matter of caſtor: rectified ſpirit diſſolves moſt readily the finer and leſs ungrateful, and water the more nauſeous bitter part: proof ſpirit acts equally, but difficultly, on both. Three ounces of powdered Ruſſia caſtor, digeſted with a gentle heat, for three days, in a quart of rectified ſpirit, communicated a deeper reddiſh tincture, and a ſtronger though rather leſs ungrateful taſte, than four ounces did to the ſame quantity of proof ſpirit by maceration without heat for ten days. On digeſting in the two ſpirits equal quantities of the powder, with equal degrees of heat, for ten or twelve hours, the tincture in proof ſpirit proved ſenſibly moſt ungrateful, and that in rectified ſpirit poſſeſſed moſt perfectly the ſpecific flavour of the caſtor: an infuſion in boiling water was bitterer and more nauſeous than either. The caſtor remaining after the action of water, retained a little of its flavour, but nothing of its nauſeous bitterneſs: that left by rectified ſpirit retained a little of the latter, but nothing of the former.

Tinct. caſtorei *Ph. Edinb.*

Ph. Lond.

In diſtillation, it gives over to water the whole of its ſmell and flavour: a quart of water, diſtilled from an ounce of Ruſſia caſtor, receives a conſiderably ſtrong impregnation, but gradually loſes greateſt part

Aq. caſtorei *Ph. Lond.*

(a) J. Marius, *Caſtorologia aucta ab J. Franco, p.* 74.

part of it in being kept. It is ſaid, that on ſubmitting to this operation large quantities of the caſtor, a ſmall portion of eſſential oil is obtained, which ſmells exceeding ſtrongly, and diffuſes its ungrateful ſcent to a great diſtance(a). This odorous and moſt active principle of the caſtor is carried off by water in a very gentle heat; infuſions or light decoctions, which are very nauſeous, yielding, however ſlowly inſpiſſated, a brittle extract, which has nothing of the ſpecific flavour of the drug, and proves in taſte but weakly though ungratefully bitteriſh. Rectified ſpirit on the other hand, diſtilled from the tincture made in that menſtruum, brings over ſcarcely any ſenſible impregnation; nearly all that it had extracted from the caſtor, remaining entire in the inſpiſſated maſs, which proves of an unctuous conſiſtence; not eaſily reducible to dryneſs.

Caſtor is commonly joined in preſcription with the deobſtruent fetid gums, volatile alkaline ſalts, the volatile oily ſpirits, and other materials of ſimilar intention. The volatile oily ſpirits are well adapted alſo as menſtrua for diſſolving the active matter both of the caſtor and of the fetid gums; at the ſame time that they prove in many caſes excellent additions to their virtue, as particularly in ſome hyſteric diſorders, and the ſeveral ſymptoms which accompany them: in this view, an ounce of Ruſſia caſtor, and half as much aſafetida, are digeſted about ſix days, in a cloſe veſſel, with a pint of the volatile ſpirit.

Tinct. caſtor. comp. *Ph. Edinb.*

CASUMUNAR.

CASUMUNAR Pharm. Lond. Bingalle; Riſagon. CASMUNAR: the root of an Eaſt India plant, of which we have no certain account; brought over in irregular ſlices of various forms, ſome cut tranſverſely and others longitudinally: the cortical part is marked with circles, and of a duſky browniſh colour: the internal part is paler, and unequally yellow.

THIS root was introduced ſome time ago by Marloe, as a medicine of uncommon efficacy in hyſteric, epileptic, paralytic, and other nervous diſorders. At preſent it is ſometimes employed as a ſtomachic, but its uſe is not yet become ſo general as it ſeems to deſerve. It is an elegant mild aromatic, moderately warm, lightly bitteriſh, in ſmell ſomewhat reſembling ginger. Its virtues are extracted in perfection by rectified ſpirit, and, on drawing off the menſtruum from the filtered tincture, remain concentrated in the inſpiſſated maſs; which ſmells very agreeably, and impreſſes on the organs of taſte a grateful bitteriſhneſs, and a durable glowing warmth, not a fiery or pungent heat. Both the tincture and extract are of a deep ſaffron colour.

(a) Cartheuſer, *Fundamenta m. m. ſect.* xii. *cap.* 48.

CEDRUS.

CEDRINUM LIGNUM Pharm. Pariſ. Cedrus conifera foliis laricis C. B. Pinus Cedrus Linn. CEDAR OF LIBANUS: a large evergreen coniferous tree, with very narrow ſtiff ſharp-pointed leaves ſtanding ſeveral together in tufts. It is a native of the bleak ſnowy mountains of Syria, and is not as yet become common in this kingdom.

THE cedar is one of the odorous reſiniferous trees; in its general medicinal qualities ſimilar to the fir, but in ſome reſpects different. The reſinous juice, extracted from inciſions made in the trunk, has a ſtronger and more agreeable kind of ſmell, and is much more diſpoſed to concrete into a ſolid brittle maſs, without loſing much of its valuable parts in the exſiccation. The wood, which is of a fine reddiſh colour and very light, is likewiſe more fragrant than the fir, and its odorous matter leſs volatile: a tincture of it in rectified ſpirit, which is reddiſh like the wood itſelf, being committed to diſtillation, the ſpirit brings over nothing of its virtue; all the active matter of the cedar remaining behind, concentrated into an elegant balſamic extract. Even boiling water does not eaſily carry off its flavour: the watery extract ſmells conſiderably of the wood, and is in taſte bitteriſh and ſaline. Marggraf relates, that on keeping the extract for ſome time, ſmall cryſtals ſhot upon the ſurface, which were found on trial to be common ſalt: and that on diſtilling the wood with water, it yielded about one ſixty-fourth its own weight of a thick, yellowiſh, eſſential oil, which grew thicker in a moderate degree of cold, and quite conſiſtent in a ſtrong one*(a)*. In the ſaline nature of the watery extract, this wood differs from all the reſinous ones that have

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(a) Memoires de l'acad. des ſcienc. de Berlin, tom. ix.

have been examined; and in the thickneſs, and congelability of its eſſential oil, from all but the lignum aloes and yellow ſaunders.

CENTAURIUM.

CENTAURIUM MINUS Pharm. Lond. & Edinb. & C. B. Gentiana Centaurium Linn. LESSER CENTAURY: a ſmall plant, with three-ribbed, ſomewhat oval leaves, ſet in pairs on the ſtalks; which divide, towards the top, into ſeveral branches, bearing umbel-like cluſters of bright red, funnel-ſhaped flowers, cut into five acute ſegments, followed by little oblong capſules full of very ſmall ſeeds. It is annual, grows wild in dry paſture grounds, and flowers in July.

THE leaves and tops of centaury are ſtrong bitters, of ſcarcely any ſmell or particular flavour. The ſeeds alſo are very bitter; the petala of the flowers, and the roots, almoſt inſipid. The flowery tops are generally made choice of, and are of conſiderable eſtimation in the preſent practice as corroborant ſtomachic bitters.

The active parts of this plant are diſſolved readily both by water and rectified ſpirit, the herb, after infuſion in ſufficient quantities of either menſtruum, remaining inſipid: infuſions of the leaves in water are of a paler or deeper browniſh colour, according as they are leſs or more ſaturated; to rectified ſpirit, the freſh leaves give a green, the dry a dark browniſh red tincture. All theſe liquors are ſufficiently elegant bitters.

Water takes up, along with the bitter, a large quantity of an inſipid mucilaginous ſubſtance, whereas rectified ſpirit ſeems to diſſolve little more than the pure bitter part. Hence, on inſpiſſating the two ſolutions to the ſame conſiſtences, the watery extract proves much leſs bitter than the ſpirituous, and its quantity above four times greater: according to Cartheuſer's experiments, an ounce of the herb yields with water above half an ounce of extract, but with ſpirit ſcarcely two ſcruples.

CENTAURIUM MAJUS.

CENTAURIUM MAJUS, ſive Rhaponticum vulgare officinarum, Pharm. Pariſ. Centaurium majus folio in plures lacinias diviſo C.B. Centaurea Centaureum Linn. GREAT CENTAURY: a large plant, with the leaves compoſed of oblong ſerrated ſegments ſet in pairs on a middle rib, which is edged, in the intermediate ſpaces, with a ſerrated margin: the ſtalk divides, towards the upper part, into ſeveral branches, bearing, on the tops, round ſoft ſcaly heads, from which come forth blueiſh floſculi, followed by down incloſing the ſeeds. It is perennial, a native of the ſouthern parts of Europe, and raiſed with us in gardens.

The root of this plant, of a dark blackiſh colour on the outſide, is internally reddiſh, and yields, when freſh, a juice of a deep red. It has a ſlight ſmell, not diſagreeable; and in chewing diſcovers a viſcous ſweetiſhneſs and roughneſs, with ſome degree of acrimony. It is reckoned aperient and corroborant, and ſuppoſed to be particularly uſeful in alvine fluxes; in which intention it has by ſome been greatly recommended, though apparently much inferiour to the root whoſe place it was employed to ſupply, to wit, the true rhapontic. Among us it has long been diſcarded from practice, and is now dropt by the colleges both of London and Edinburgh.

CEPA.

CEPA Pharm. Lond. Cepa vulgaris C. B. Allium Cepa Linn. Onion: a plant with a ſingle bulbous root compoſed of a number of coats; producing long fiſtular leaves, and a tall naked bellied ſtalk, bearing a large cluſter of hexapetalous white flowers, each of which is followed by a roundiſh capſule, containing a number of black angular ſeeds. It is cultivated in gardens for culinary uſes.

Onions are very acrid, ſtimulating, and of little nouriſhment. Taken freely in hot bilious diſpoſitions, they produce flatulencies, thirſt, headachs, and febrile ſymptoms. In cold ſluggiſh phlegmatic temperaments, they are of ſervice; warming the habit, attenuating viſcid humours, and promoting the natural excretions, particularly expectoration and urine. They are likewiſe powerfully antiſeptic, and by virtue of this quality are recommended by ſome as a ſalubrious addition to the food in ſcorbutic caſes. Externally, they are employed in cataplaſms for ſuppurating hard tumours: ſome recommend them alſo to be rubbed on bald places for promoting the growth of hair. Frederic Hoffman reports, that ſuppreſſions of urine, in children, are ſpeedily relieved, by the application of roaſted onions to the region of the pubes.

The root, which is the moſt acrid part of the plant, loſes greatly in drying, both of its ſmell and taſte, together with near ſeven eighths of its weight. It gives out its virtue, by infuſion, both to water and to rectified ſpirit, but not readily, nor completely, to either. In diſtillation, the whole of its acrimony and peculiar flavour ariſe with water, and a very conſiderable part with ſpirit: the diſtilled water ſmells exceeding ſtrongly and offenſively of the onion, but no eſſential oil could be obtained on ſubmitting to the operation ſeveral pounds of the root. The watery decoction, inſpiſſated to the conſiſtence of an extract, is very mucilaginous, but of ſcarcely any particular taſte; and the taſte of the ſpirituous extract is very weak. The active matter of onions appears therefore to be of a much more volatile kind than that of garlic, with which, in other reſpects, it nearly agrees.

CERA.

BEES WAX: a ſolid concrete, collected from vegetables by the bee; and extracted from the combs, after the honey is got out, by heating and preſſing them: lighter than water, heavier than proof ſpirit; ſoluble in rectified ſpirit, very ſparingly, and not without the aſſiſtance of heat, into a gelatinous liquid; not diſſoluble at all in watery liquors; melting, by a heat a little greater than that which the hand can ſupport, into the appearance of oil, and in this ſtate eaſily miſcible with oils and liquid fats; readily inflammable, and burning totally away; almoſt totally ariſing in diſtillation, partly in form of a thick empyreumatic oil, and partly in that of a conſiſtent butyraceous matter, which by repeated diſtillation becomes fluid and thin.

1. CERA FLAVA *Pharm. Lond. & Edinb.* Yellow wax; in the ſtate wherein it is obtained from the combs. When new, it is of a lively yellow, ſomewhat tough, yet eaſy to break: by age, it loſes its fine colour, and becomes harder and more brittle.

2. CERA ALBA *Pharm. Lond. & Edinb.* White wax: the yellow wax artificially bleached, by reducing it into thin flakes, expoſing theſe for a length of time to the ſun and open air, and ſprinkling them occaſionally with water: when ſufficiently whitened, the wax is melted and caſt into cakes.

Yellow wax, when in perfection, has an agreeable ſmell, ſomewhat reſembling that of honey: by long keeping, and in the proceſs by which it is whitened, its ſmell is in good meaſure diſſipated. Diſtilled with water, by a boiling heat, it impregnates the liquor ſlightly with its ſcent, but gives no appearance of any eſſential oil; nor is the whole of its odorous matter to be eaſily ſeparated by this proceſs. Chewed, it proves tenacious, does not mingle with the ſaliva, or diſcover any particular taſte. The gelatinous ſolution, obtained by boiling it in ſpirit of wine, by mixture with a thick mucilage of gum-arabic, becomes ſoluble in water, ſo as to form therewith an emulſion or milky liquor: the wax itſelf is made in like manner ſoluble, without the intervention of ſpirit, by thoroughly mixing it with the gum in fine powder: when thus diſſolved, it proves ſtill inſipid, and perfectly void of acrimony.

The chief medicinal uſe of wax is in plaſters, unguents, and other like external applications; partly for giving the requiſite conſiſtence to other ingredients; and partly on account of its own emollient quality. The yellow ſort, diſſolved into an emulſion, or mixed with ſpermaceti, oil of almonds, conſerve of roſes, &c. into the form of an electary; or divided, by ſtirring into it, when melted over a gentle fire, as much, as it will take up, of powdery matters, as the compound crabs-claw powder; is given alſo internally, and often with great ſucceſs, in diarrhœas and dyſenteries, for obtunding the acrimony of the humours, ſupplying the natural mucus of the inteſtines, and healing their excoriations or eroſions.

The empyreumatic oil, into which wax is reſolved by diſtillation with a ſtrong heat, is greatly recommended by Boerhaave and others, for healing chaps and roughneſs of the ſkin, for diſcuſſing chilblains, and, with the aſſiſtance of proper fomentations and exerciſe, againſt ſtiffneſs of the joints and contractions of the tendons. It is, doubtleſs, highly emollient, but does not appear to have any other quality by which it can act in external applications: it has nothing of the acrimony or pungency, which prevail in all the other known diſtilled vegetable oils; though in ſmell it is not a little diſagreeable and empyreumatic, a circumſtance which occaſions it to be at preſent more rarely uſed than it has been heretofore. As the wax ſwells up greatly in the diſtillation, it is convenient to divide it, by melting it with twice its weight of ſand, or putting the ſand above it in the retort, that it may mingle with the wax when brought into fuſion. The oil, which is preceded by a ſmall quantity of acid liquor, congeals in the neck of the retort, from whence it may be melted down by applying a live coal, and made fluid by rediſtilling it two or three times without addition.

CETERACH.

ASPLENIUM ſive Ceterach Ph. Pariſ. Ceterach officinarum C. B. Scolopendria vera Tragi. Aſplenium Ceterach Linn. SPLEENWORT or MILTWASTE: a ſmall buſhy plant, growing in fiſſures of rocks and old walls; conſiſting of capillary blackiſh roots, and long narrow leaves, cut down to the rib, on each ſide, alternately, into a number of oblong obtuſe narrow ſections with broad baſes. It has no ſtalk or flower: the ſeeds are a yellow powder produced on the backs of the leaves.

THE leaves of ceterach have an herbaceous, mucilaginous, roughiſh taſte, and no conſiderable ſmell: with ſolution of chalybeate vitriol, they ſtrike a blackiſh colour. They ſtand recommended as a pectoral, ſimilar to maidenhair, to which they have been frequently joined in infuſions and apozems; and likewiſe as an aperient in obſtructions of the viſcera. Mr. Morand relates, that there has lately been diſcovered in them an excellent diuretic virtue; that they were uſed with great ſucceſs by count D'Auteuil, a Spaniſh naval commander, againſt the gravel, with which he was violently tormented; that they have ſince come greatly into uſe at Paris, Verdun, and Grenoble; that from the obſervations made there, they appear to gently carry off ſand, cleanſe the kidneys, and allay pains in the urinary paſſages; and that the way of uſing them is, to drink infuſions of them in the morning as tea, with the addition of ſuch other medicines as particular caſes may require.

CEVADILLA.

CEVADILLA hiſpanorum Ph. Pariſ. (i. e. hordeolum). Sebadilla. Sabadilla. Hordeum cauſticum C. B. INDIAN CAUSTIC BARLEY: the ſeed-veſſel of a Mexican plant, reſembling in its form and ſtructure a barley ear, but with ſmaller ſeeds, not above the ſize of linſeed.

THESE ſeeds appear, from the accounts given of them by ſome authors, to be the ſtrongeſt of the vegetable cauſtics. Monardes reports, that in putrid verminous ulcers, and gangrenes, they have the ſame effects as corroſive ſublimate, or the actual cautery; and that the way of uſing them is, to ſprinkle a little of the powdered ſeed upon the part, or, for the greater ſafety, to dilute it with watery liquors, and apply lint dipt in the mixture *(a)*. In Linnæus's *amœnitates academicæ* they are ſaid to be the moſt effectual of all medicines for deſtroying cutaneous inſects in children. In France, they are ranked among the officinals: in this country they are very rarely to be met with.

CHÆREFOLIUM.

CHÆREFOLIUM Pharm. Edinb.(b) Chærophyllum ſativum C. B. Gingidium. Scandix Chærefolium Linn. CHERVIL: an umbelliferous plant, with winged leaves ſomewhat like thoſe of parſley, producing ſmooth longiſh ſeeds ſhaped like a bird's beak. It is a native of the ſouthern parts of Europe, and ſown annually with us in gardens.

CHERVIL is a ſalubrious culinary herb; ſufficiently grateful both to the palate and ſtomach; ſlightly aromatic; gently aperient and diuretic. The expreſſed juice is recommended by Riverius and others in dropſies; and Geoffroy relates, that he has found it, from experience, of remarkable ſervice in this diſeaſe, that it acts mildly and without irritation, and abates inflammatory ſymptoms. He directs three or four ounces of the depurated juice, with ſeven or eight grains of nitre, and half an ounce of a ſyrup of the five opening roots, to be taken daily every four hours; though he intimates alſo that the chervil juice has ſucceeded without any aſſiſtance. He obſerves that it is to be uſed with caution where the patient is troubled with a cough or a ſpitting of blood, as being liable to aggravate theſe complaints, in conſequence of a nitrous ſalt by virtue of which he ſuppoſes this juice to act.

The depurated juice, inſpiſſated to the conſiſtence of an extract, is manifeſtly ſaline to the taſte, but not entirely of the nitrous kind: it is more pungent than nitre, and did not viſibly deflagrate in the fire. Of the aromatic flavour of chervil, little or nothing accompanies the juice; though water, as well as ſpirit, extracts greateſt part of it by infuſion.

(a) Ray, *Hiſtoria plantarum, tom.* ii. *p.* 1246.

(b) Expunged.

The aromatic matter of this herb is of a very volatile kind, being ſoon diſſipated in drying or boiling: in diſtillation with water, there ſeparates from the aqueous fluid a ſmall portion of eſſential oil, reſembling in taſte, as Hoffman obſerves, the eſſential oil of fennel ſeeds.

CHAMÆDRYS.

CHAMÆDRYS Pharm. Lond. Chamædrys minor repens C. B. Chamædrys vulgo vera exiſtimata J. B. Teucrium Chamædrys Linn. GERMANDER: a low creeping ſhrubby plant; with ſquare ſtalks; ſmall ſtiff oval leaves, notched from about the middle to the extremity, like thoſe of the oak tree, ſet in pairs at the joints; and purpliſh labiated flowers, ſet thick together, wanting the upper lip. It grows wild in ſome of the woods of France, Germany, and Switzerland: with us it is raiſed in gardens, and flowers in June and July.

THE leaves and tops of germander have a moderately bitter taſte, accompanied with a weak aromatic flavour, which is diminiſhed a little in drying, but not totally diſſipated in keeping for ſeveral months. They ſtand recommended as mild aperients and corroborants, in uterine and other obſtructions, intermitting fevers, and in the rheumatiſm and gout. They make a principal ingredient in the alterative antiarthritic compoſitions preſcribed by the ancients; whoſe uſe has lately been revived, with little variation; and which are ſaid, when long perſiſted in, by ſtrengthening the habit, rendering the blood more fluid, and promoting perſpiration, to prevent returns of the gouty paroxyſms. In ſome arthritic caſes, theſe and other warm bitter medicines have been of conſiderable ſervice: in others, they have been continued for years without any apparent benefit: in others, particularly in hot diſpoſitions, in perſons of an advanced age, and who had long ſuffered the diſeaſe, the abatement they procured of the gouty paroxyſms has been followed by ſymptoms more alarming.

The tops of the plant, gathered when the ſeeds are formed, are generally preferred to the leaves. Their doſe, in ſubſtance, dried and powdered, is from half a dram to a dram or more. They give out their virtues both to watery and ſpirituous menſtrua; and tinge the former of a yellowiſh colour inclining more or leſs to brown, according to the degree of ſaturation; the latter of a deep green. Water ſeems to diſſolve the bitter matter more perfectly than pure ſpirit; the watery extract being ſtronger in taſte than the ſpirituous, though the quantity of both extracts, according to Cartheuſer's experiments, is very nearly alike.

CHAMÆMELUM.

CAMOMILE: a plant with finely divided leaves; and moderately large flowers, ſtanding ſolitary on the tops of the ſtalks, upon long naked pedicles: the flower is compoſed of a number of white petala, ſet round a yellow convex diſk.

1. CHAMÆMELUM *Pharm. Lond. & Edinb. Chamæmelum nobile ſeu leucanthemum odoratius C. B. Anthemis nobilis Linn. Chamomilla.* Trailing perennial camomile, called Roman. It is found wild in moiſt paſture grounds in ſeveral parts of England, but commonly cultivated in gardens, and flowers in June and July.

THE leaves and flowers of this plant have a ſtrong, not ungrateful ſmell; and a very bitter nauſeous taſte. The flowers are ſomewhat bitterer, and conſiderably more aromatic than the leaves; and the yellow diſk of the flower is, in both reſpects, far ſtronger than the white petala. The ſmell, as well as the taſte, is rather improved than weakened by careful drying, and does not ſoon ſuffer any conſiderable diminution in keeping.

This plant, beſides its general virtues as a bitter, has been ſuppoſed to have ſome degree of a carminative, anodyne, and antiſpaſmodic power, depending on its odorous matter. It is recommended in colics of different kinds, particularly ſuch as ariſe from flatulencies or cold; in hyſterical and hypochondriacal diſorders, and nephritic pains; in the pains of childbed women, and deficiencies of the uterine purgations; and intermitting fevers, where a viſcidity of the humours, or obſtructions of the viſcera, render the Peruvian bark ineffectual or prejudicial. In this laſt intention, the camomile is generally aſſiſted by fixt alkaline ſalts, ſal ammoniac, or other aperients, and often, alſo, by corroborating materials: Baglivi's preparation of camomile, which he looks upon as the moſt certain ſpecific in obſtinate intermittents*(a)*, was probably rather a compoſition of this kind, than any particular preparation of the camomile alone. The doſe of the dry flowers, in ſubſtance, is from ten or twelve grains to half a dram or more; in decoction or infuſion, two drams.

Camomile flowers give out their virtues both to water and rectified ſpirit; infuſions made in the former are of a yellowiſh brown colour, in the latter of a bright gold yellow: when the flowers have been dried ſo as to be pulverable, the infuſions prove more grateful than when they are freſh or but moderately dried. Diſtilled with water, they impregnate the aqueous fluid pretty ſtrongly with their flavour: if the quantity of camomile, ſubmitted to the operation, is large, a little eſſential oil ſeparates and riſes to the ſurface of the water, in colour yellow with a caſt of greeniſh or brown, of a pungent taſte, and a ſtrong ſmell exactly reſembling that of the camomile. Decoctions of the flowers, inſpiſſated, though with a very gentle heat, to the conſiſtence of honey, loſe almoſt all the peculiar flavour of the plant, retaining its bitterneſs entire: the extract diſcovered to the taſte a ſlight ſaline kind of auſterity joined to the bitter; and on keeping for ſome months, threw off to the ſurface a number of minute ſaline cryſtals.

Ol. eſſent. flor. chamæm. *Ph. Lond.*

Rectified ſpirit, drawn off from the ſpirituous tincture, brings over likewiſe a part of the flavour of the camomile, but leaves a conſiderable part behind in the extract. The ſmell is in great meaſure covered or ſuppreſſed by the ſpirit, in all the ſpirituous preparations; but the taſte, both in the ſpirituous tincture and extract, is conſiderably ſtronger than in the watery.

The leaves and flowers are frequently employed externally, in diſcutient and antiſeptic fomentations, and in emollient and carminative glyſters. They appear, from Dr. Pringle's experiments, to ſtand very high in the ſcale of antiſeptics; the ſoluble part of the flowers reſiſting the putrefaction of animal fleſh, with a power at leaſt one hundred and twenty times greater than ſea ſalt. Some endeavour to impregnate oil olive with the active matter of the camomile, for external uſes, by gently boiling the freſh herb and flowers bruiſed, in thrice their quantity of the oil, till they become criſp; and then ſtraining and preſſing out the fluid. A preparation of this kind might be obtained to better purpoſe, by a proceſs ſimilar to that, whereby expreſſed oils are perfumed with the fragrance of the more odoriferous flowers (ſee Ben); or by infuſing the flowers in the oil without heat; for the ſtrong heat, neceſſary for making the fluid boil, impreſſes a diſagreeable taint, and diſſipates greateſt part of the volatile matter of the camomile.

(a) *De fibra motrice & morboſa, cap.* xiii. *Oper. p.* 389.

2. Chamæmelum flore pleno: *Chamæmelum nobile flore multiplici C. B.* Double camomile: a variety of the foregoing, produced by culture; differing in the flowers being double, or having ſeveral rows of the white petala, and the diſk proportionably ſmaller.

The ſingle and double flowered camomiles have been often uſed indiſcriminately, and are allowed to be ſo uſed by the faculty of Paris. The leaves of the two plants are indeed alike, in quality as well as in their external form: but with regard to the flowers, as their active matter is almoſt wholly confined to the yellow diſk, and as the ſingle have large diſks, but the double very ſmall ones, and when very double, ſcarcely any at all; it is plain that the latter cannot be equivalent to the former unleſs taken in much greater quantity; and that therefore the ſingle or large-diſked flowers alone ought to be employed for medicinal uſes.

3. Chamæmelum vulgare, *Anthemis. Chamæmelum vulgare leucanthemum dioſcoridis C. B. Matricaria Chamomilla Linn.* Common camomile; upright, annual, growing wild in corn fields.

This ſpecies alſo is allowed by the faculty of Paris to be uſed indifferently with the Roman camomile. Both its leaves and flowers are much weaker than thoſe of the Roman, and their ſmell of a leſs agreeable kind: ſometimes they have ſcarce any ſmell at all. They yield in diſtillation conſiderably leſs oil: from eight pounds of the flowers of the Roman were obtained about five drams, or a very little more; from the ſame quantity of thoſe of the common, ſcarcely three drams. The oils of the two plants are in ſmell and taſte nearly alike, but in colour remarkably different, that of the common being of a beautiful deep blue: if the oil is carefully kept, it retains its fine colour for many years; but if the air is admitted to it, the blue degenerates in a ſhort time to a yellow, like that which the oil of the other ſort has on its firſt diſtillation.

4. COTULA FOETIDA *Chamæmelum fœtidum C. B. Anthemis Cotula Linn.* Mayweed or ſtinking camomile: annual, more upright than the other camomiles, with finer leaves, the flowers thicker together and their diſks more convex and protuberant. It grows in waſte grounds, and among corn.

This ſpecies differs greatly in quality from the three preceding. Its ſmell is diſagreeable: the flowers have little or no taſte; the leaves a ſtrong one, of the acrid bitteriſh kind. It has never been much in uſe, nor are its medicinal effects well known. Decoctions of it are ſaid to have been ſometimes employed as a bath or fomentation, againſt hyſteric ſuffocations, and hæmorrhoidal pains and ſwellings. Mr. Ray ſays, that a decoction of the herb has by ſome been given internally, with ſucceſs, in ſcrophulous caſes. Brown Langriſh gives an account of a decoction of it throwing a perſon affected with rheumatiſm into a profuſe ſweat, and curing him.

CHAMÆPITYS.

CHAMÆPITYS Pharm. Lond. Chamæpitys lutea vulgaris ſive folio trifido C. B. Abiga & ajuga quibuſdam. Teucrium Chamæpitys Linn. GROUNDPINE: a low, hairy, creeping plant, with ſquare ſtalks; whitiſh clammy leaves, cut deeply into three long narrow ſegments like thoſe of the pine tree, ſet in pairs at the joints; and yellow labiated flowers, without pedicles, and wanting the upper lip. It is annual, grows wild in ſandy and chalky grounds in ſome parts of England, and flowers in July.

THE leaves of groundpine are moderately bitter, and of a reſinous, not diſagreeable ſmell; approaching in this reſpect, as in their external form, to thoſe of the pine tree. They are recommended as aperients, and corroborants of the nervous ſyſtem; and ſaid to be particularly ſerviceable in female obſtructions, paralytic diſorders, and when continued for a length of time, either by themſelves or with the aſſiſtance of germander, in rheumatic, iſchiadic, and gouty pains.

The leaves in ſubſtance, dried and powdered, are directed to be given from half a dram to a dram. Their virtues are extracted both by water and ſpirit, moſt perfectly by the latter: the aqueous tinctures are yellowiſh, the ſpirituous green. In diſtillation, they weakly impregnate water with their reſinous ſcent: on diſtilling large quantities of the herb, a little eſſential oil may be collected, in quality ſomewhat approaching to that of turpentine. The watery extract has, joined to its bitterneſs, a weak ſaline auſterity; the ſpirituous, a ſlight ſweetiſhneſs and warmth.

CHEIRI.

CHEIRI, ſive Leucoium luteum Pharm. Edinb. (a) *Leucoium luteum vulgare C. B. Viola lutea Gerard. Cheiranthus Chieri Linn.* WALL FLOWER: a plant with woody brittle ſtalks and branches; ſmooth, dark green, oblong, narrow, ſharp-pointed leaves; and numerous, tetrapetalous, yellow flowers, opening ſucceſſively, on the tops, followed by long ſlender pods containing reddiſh flat ſeeds. It grows wild upon old walls and among rubbiſh, and flowers in April and May.

THE flowers of cheiri have a moderately ſtrong pleaſant ſmell, and a nauſeous, bitteriſh, ſomewhat pungent taſte; which ſeem to afford ſome foundation for the nervine and deobſtruent virtues commonly aſcribed to them. They give out their active matter, together with a deep yellow tincture, both to water and ſpirit; and impregnate water, in diſtillation, with their odoriferous principle ſeparated from the other parts; but no oil is obtained, at leaſt when only moderate quantities, as a pound or two of the flowers, are ſubmitted to the operation at once. The decoction, after the diſſipation of the aromatic matter, diſcovers, beſides the ſtrong taſte manifeſt in the flowers themſelves, a ſenſibly ſaline one.

CHELIDONIUM MAJUS.

CHELIDONIUM MAJUS Pharm. Edinb. (b) *Chelidonium majus vulgare C. B. & Linn.* CELANDINE: a plant with longiſh leaves, divided to the rib into roundiſh indented portions, of which thoſe at the extremities are much larger than the others, of a bright green colour on the upper ſide, blueiſh green underneath, full of a gold coloured juice, as are likewiſe the ſtalks: from the boſoms of the leaves iſſue long pedicles, bearing cluſters of tetrapetalous yellow flowers, which are followed by browniſh pods containing flattiſh ſhining black ſeeds: the root is pretty thick at top, with a number of fibres at bottom, externally browniſh, internally of a deep yellowiſh red or ſaffron colour. It is perennial, grows wild in hedges and ſhady waſte places, and flowers in May and June.

(a) Expunged.

(b) Expunged.

The leaves and roots of celandine have a faint unpleaſant ſmell, and a bitteriſh, very acrid, and very durable taſte, which is conſiderably ſtronger in the roots than in the leaves. Both water and rectified ſpirit extract nearly the whole of their pungent matter: the leaves, notwithſtanding the yellow juice which iſſues ſo plentifully from a ſlight wound, and in which their activity appears to reſide, give to rectified ſpirit a green tincture: the roots, which yield a copious ſaffron red juice, tinge the ſame menſtruum of a browniſh yellow. The pungency of this plant is not of the volatile kind, little or nothing of it riſing in diſtillation, with water, any more than with ſpirit: it is nevertheleſs greatly abated by drying the plant itſelf, or by inſpiſſating, with a gentle heat, the ſpirituous or watery infuſions. The ſmell of the herb is wholly diſſipated in drying.

This acrid plant ſtands recommended as a powerful aperient and attenuant, in obſtinate jaundices when not accompanied with inflammatory ſymptoms, in cachexies, chloroſes, dropſies, and other diſeaſes. Half a dram or a dram of the dry root in powder; or an infuſion, in wine or water, of a dram or a dram and a half of the freſh root; or three or four drops of its ſaffron-coloured juice, in any convenient vehicle; are directed for a doſe. Great caution is requiſite in the internal uſe of a medicine ſo acrimonious and irritating; more particularly in acute diſtempers, in which infuſions of it, made in vinegar, have by ſome been recommended as a ſudorific. Among us, it is employed chiefly by the common people for ſome external purpoſes; as the deſtroying of warts, cleanſing foul ſores, removing ſome cutaneous defedations, and clouds and beginning ſuffuſions of the eyes: for this laſt intention, the juice is diluted largely with milk, being of itſelf much too ſharp to be applied with ſafety to ſo tender an organ.

CHELIDONIUM MINUS.

CHELIDONIUM MINUS Pharm. Edinb.(a) Chelidonia rotundifolia minor C. B. Ranunculus Ficaria Linn. PILEWORT: a ſmall plant, with roundiſh, ſmooth, ſhining green leaves, ſet on long pedicles; and ſlender procumbent ſtalks; bearing bright gold-coloured ſolitary flowers, of eight or nine petala, which ſtand in three-leaved cups, and are followed by cluſters of naked ſeeds: the root conſiſts of ſlender fibres, with a number of tubercles or little knobs among them. It is perennial, grows wild in hedges and moiſt meadows, and flowers in April.

THE leaves of pilewort are ranked among the antiſcorbutics, but do not promiſe to be of much virtue: they have no ſmell, and only an herbaceous taſte, which, on chewing conſiderable quantities of them for ſome time, is followed by a very ſlight pungency. The roots are celebrated as a ſpecific againſt the piles: they have been ſometimes given inwardly, but chiefly applied externally, in the form of a cataplaſm, lotion, or unguent. Boerhaave relates, that he cured an atrabiliary perſon who was troubled with the piles, by uſing daily a decoction of two ounces of this root, after ſundry other medicines had been tried in vain. Perhaps the pilewort root acts, in theſe caſes, little otherwiſe than as a ſimple emollient: it has a ſoft ſweetiſh taſte, and yields with water a large proportion of a mucilaginous extract.

CHINA.

CHINA RADIX Pharm. Edinb.(a) CHINA ROOT: an oblong thick jointed root, full of irregular knobs, of a reddiſh brown colour on the outſide, and a pale reddiſh within. Two ſorts are common in the ſhops, an oriental and occidental: the firſt, which is accounted the beſt, is conſiderably paler coloured and harder than the other. Of either kind, ſuch ſhould be choſen, as is freſh and heavy, and which, when cut, exhibits a cloſe, ſmooth, gloſſy ſurface.

The plant is a climber, with tendrils like thoſe of the vine, producing cluſters of ſmall flowers, which are followed by pretty large berries.

(a) Expunged.

The oriental ſpecies *(Smilax China Linn.)* has roundiſh prickly ſtalks and red berries, and is a native of China and Japan: the occidental *(Smilax Pſeudo-China Linn.)* has rounder ſmooth ſtalks and black berries, grows wild in Jamaica and Virginia, and bears the colds of our own climate.

THESE roots have ſcarce any ſmell or particular taſte: when freſh, they are ſaid to be ſomewhat acrid, but as brought to us they diſcover, even when long chewed, no other than a ſlight unctuoſity in the mouth. Boiled in water, they impart a reddiſh colour, and a kind of vapid ſoftneſs: the decoction, inſpiſſated, yields an unctuous, farinaceous, almoſt inſipid maſs, amounting to upwards of half the weight of the root. They give a gold yellow tincture to rectified ſpirit, but make no ſenſible alteration in its taſte: on drawing off the ſpirit from the filtered liquor, there remains an orange-coloured extract, nearly as inſipid as that obtained by water, but ſcarcely in half its quantity.

China root is generally ſuppoſed to promote perſpiration and urine, and by its ſoft unctuous quality, to obtund acrimonious humours. It was firſt introduced into Europe about the year 1535, with the character of a ſpecific againſt venereal diſorders: the patient was kept warm, a weak decoction of china root uſed for common drink, and a ſtronger decoction taken twice a day in bed to promote a ſweat. Such a regimen is doubtleſs a good auxiliary to mercurial alteratives: but whatever may be its effects in the warmer climates, it is found in this to be, of itſelf, greatly inſufficient. At preſent, the china root is very rarely made uſe of, having for ſome time given place to ſarſaparilla, which is ſuppoſed to be more effectual. Proſper Alpinus informs us, that this root is in great eſteem among the Egyptian women for procuring fatneſs and plumpneſs.

CICHOREUM.

CICHOREUM Pharm. Edinb. (a) Cichoreum ſilveſtre ſive officinarum C. B. Cichorium Intybus Linn. WILD CICHORY: a plant with oblong, dark green, ſomewhat hairy leaves, deeply jagged, like thoſe of dandelion,

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(a) Expunged.

but larger; in the boſoms of which, towards the tops of the branches, the flowers come forth in ſpikes, conſiſting, each, of a number of blue flat floſculi, ſet in a ſcaly cup, which afterwards becomes a covering to ſeveral ſhort angular ſeeds: the root is long and ſlender, of a brown colour on the outſide, and white within. It is biennial, grows in hedges and by road ſides, and flowers in June and July.

Wild cichory abounds with a milky juice, of a penetrating bitteriſh taſte, and of no remarkable ſmell or particular flavour: the roots are bitterer than the leaves or ſtalks, and theſe much more ſo than the flowers. By culture in gardens it loſes its green colour, and in great meaſure its bitterneſs, and in this ſtate is a common ſallad herb. The darker coloured, and the more deeply jagged the leaves are, the bitterer is the taſte of all the parts of the plant.

The roots and leaves of wild cichory are very uſeful aperients, acting mildly and without irritation, tending rather to abate than to increaſe heat, and which may therefore be given with ſafety in hectic and inflammatory caſes. Taken freely, they keep the belly open, or procure a gentle diarrhœa; and when thus continued for ſome time, they have often proved ſalutary in beginning obſtructions of the viſcera, in jaundices, cachexies, hypochondriacal and other chronical diſorders. Geoffroy relates, that he has known inveterate and ſtubborn intermittents cured by the daily uſe of wild cichory leaves, after many febrifuges had been tried in vain.

The virtues of the cichory reſide in the milky juice; and may be extracted by expreſſion, or by infuſing or boiling the herb or root in water or in ſpirit. The plant ſeems to loſe nothing of its taſte in drying; or the juice or infuſions in being gently inſpiſſated to the conſiſtence of an extract; though the plant in its recent ſtate, or the liquors uninſpiſſated, are ſuppoſed to be of moſt efficacy. The watery extract is ſomewhat larger in quantity than the ſpirituous, and this laſt is proportionably ſtrongeſt in taſte.

CICUTA.

CICUTA Pharm. Edinb. Cicuta major C. B. Conium maculatum Linn. Hemlock: a tall umbelliferous plant, with large leaves, of a blackiſh green colour on the upper ſide, and a whitiſh green underneath, divided into a number of ſmall oblong ſomewhat oval ſegments, which ſtand in pairs on middle ribs: theſe ſegments are again deeply cut, but not quite divided, on both ſides; and many of theſe ultimate ſections have one or two ſlighter indentations. The ſtalk is round, ſmooth, hollow, irregularly variegated with ſpots and ſtreaks of a red or blackiſh purple colour. The flowers are white; the ſeeds greeniſh, flat on one ſide, very convex and marked with five furrows on the other. The root is oblong, about the ſize of a middling parſnep, yellowiſh without, white and fungous within. The plant is annual or biennial; common about the ſides of fields, under hedges, and in moiſt ſhady grounds; and flowers in June and July.

The leaves of hemlock have a rank ſmell: the organs of taſte, they affect but little. On expreſſion, they give out their ſmell to the juice; which, on being directly inſpiſſated with a gentle heat, to the conſiſtence of an extract, retains great part of the ſcent, and diſcovers an unpleaſant ſubacrid taſte ſeemingly of the ſubſaline kind. If the juice be ſuffered to ſettle till it becomes clear, it loſes nearly all the ſpecific flavour of the hemlock, the odorous principle ſeeming to ſeparate and ſubſide along with the herbaceous feculencies: the proper menſtruum of this matter is rectified ſpirit of wine; which completely extracts the ſmell, both of the leaves in ſubſtance and of the inſpiſſated juice, and receives, from both, a green tincture. The ſaturated tincture, mixed with water, grows turbid, and depoſites a green reſin.

This herb is recommended externally, in cataplaſms, fomentations, and plaſters, as a powerful reſolvent and diſcutient. Taken internally, in no great quantity, it has occaſioned diſorders of the ſenſes, ſleep, convulſions, and in ſome inſtances death; and hence it is ranked among the poiſonous plants: Boerhaave tells us, that by the effluvia of the herb bruiſed and ſtrongly ſmelt to, he became vertiginous(*a*). It is ſaid, that to certain brute animals, it is innocent(*b*); and that its ill qualities

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(*a*) *Hiſtoria plantar. Lugd. Bat. p.* 94. Haller, *Stirpes helveticæ, p.* 434.

(*b*) Quippe videre licet, pingueſcere ſæpe cicuta
Barbigeras pecudes, homini quæ eſt acre venenum. *Lucretius.*

are

are corrected by vinegar or other vegetable acids(a). Of its effects in ſmall doſes, inſufficient to do harm, in which it has been by ſome recommended, nothing material was known, till the happy experiments of Dr. Stœrck, lately publiſhed(b), gave room to hope, not only that the virtues aſcribed to it in external applications are better founded than practitioners in general ſeem now to ſuppoſe, but likewiſe that it is a plant of very great importance as an internal medicine.

Dr. Stœrck relates, that bags of the dry leaves, quilted together, boiled for a few minutes in water, (or in milk, where they could not otherwiſe be borne, on account of their ſmell and the itching they produced) then ſqueezed from the ſuperfluous liquid, and applied warm, checked the progreſs of very bad gangrenes, and procured a ſeparation of the corrupted parts: that the ſame application, in a perſon of ſixty who had been gouty for ſeveral years, immediately abated the pains, ſoftened and diſcuſſed the tophaceous concretions, and occaſioned the next fit to be milder and of ſhorter continuance: that its effects were likewiſe conſiderable in œdematous tumours, ſcirrhous ſtrumæ, indurations of the glands of the breaſt, and in very bad cancers: that nevertheleſs ſome received from it no benefit, though no one harm: that in inflammations or hot ſerous tumours, it was leſs proper than in the above caſes, or had place only after evacuations: and that plaſters, containing the juice of the hemlock, often reſolve and diſcuſs what reſiſts all other applications. It is in the form of plaſter that this herb, among us, has been chiefly made uſe of: the recent juice is mixed with a ſolution of twice its quantity of gum ammoniacum made in vinegar of ſquills, and the mixture boiled down to a due conſiſtence.

(a) Cicuta, præſens illud venenum, ſi coquitur in aceto, ſine noxa comedi poteſt, quod probavi aliquoties, experimenti ergo, Lugduni Batavorum, ubi in foſſis extra urbem frequens creſcit, *Lindeſtolpe, de venenis, edit. Stentzel. p.* 431.—Cicutæ caules, aceto macerati, impune comeduntur, & ipſe edi. *Id. p.* 781.

A large ſpoonful of hemlock juice given to a cat, had no ſenſible effect: a ſecond produced a viſible *embarras* on the region of the reins: in a little time the animal ſtaggered, but did not fall: on ſwallowing a third ſpoonful, ſhe ran away, and was preſently out of ſight. A quarter of an hour after, ſhe was found, ſtretched out, motionleſs, her paws rigid. Half a dram of theriaca, diluted with two large ſpoonfuls of wine, had no good effect. A large ſpoonful of freſh lemon juice was ſcarce ſwallowed, when the animal got up on her legs, appeared free from pain, as if nothing had happened—continues in perfect health. *Mr.* Haram, *apothecary* at *Chartres. Rozier Tableau, tom.* i. 1773.

(b) *Libellus quo demonſtratur cicutam, &c. Vindobonæ,* 1760.

For internal purpoſes, he directs the juice, while freſh, without ſuffering it to ſettle, to be inſpiſſated in an earthen veſſel over a very gentle fire, and kept continually ſtirring to prevent its burning, till it acquires the conſiſtence of a thick extract; which is to be mixed with ſo much of the powdered leaves, as will reduce it into a maſs fit for being formed into pills. This preparation, he ſays, was given to a little dog, in the quantity of a ſcruple; taken by himſelf, in doſes of one and two grains, every morning and evening, for ſeveral days; continued by perſons in health, for a year or two; increaſed, in ſome caſes, to a dram and a half in a day; without producing any ill conſequence, or affecting any of the actions, ſecretions, or excretions of the body. It nevertheleſs had very powerful and ſalutary effects in ſome reputed incurable diſeaſes; acting, though ſlowly and inſenſibly, as a high reſolvent: he relates hiſtories of inveterate ſcirrhuſes, cancers, and the worſt kinds of ulcers and fiſtulæ, being completely cured by it; and ſays it reſolves alſo recent cataracts, or at leaſt reſtrains their progreſs. He begins always with ſmall doſes; giving one pill, of two grains, firſt twice a day, then thrice a day, and gradually increaſing the number to ſix or more for a doſe. The good effects of the medicine were ſometimes viſible in a few days; though the cure generally required ſeveral months.

The trials of this medicine, made among us, have not, as yet, ſo far as I can learn, been accompanied with ſo much ſucceſs. I have been informed of ſome caſes, in which it was apparently of great benefit; of ſome, in which it did no ſervice; and, of ſome, in which it affected the ſpeech and hearing. It has been ſuſpected that the general inefficacy of the medicine in this country was owing either to our hemlock being different in quality from the German, or to the extract being leſs ſkilfully prepared; but ſome of the extract has been procured from Dr. Stœrck himſelf, and found to ſucceed no better than our own: though the medicine has ſeldom been accompanied with very happy effects, it had activity enough to be productive of alarming ſymptoms.

In the third volume of the medical obſervations and inquiries publiſhed by a ſociety of phyſicians in London, Dr. Fothergill and Dr. Rutty have given two papers on this medicine, drawn from extenſive practice in England and Ireland; from which we have grounds to perſuade ourſelves, that though the cicuta is far from anſwering the expectations which Dr. Stœrck had raiſed, it may nevertheleſs be an uſeful acquiſition, and may aſſiſt in curing ſome diſorders, and alleviating others, in which the common medicines are inadequate auxiliaries. In real cancers, whether ulcerated or occult, there is no inſtance of its effecting a complete cure; but it was found to retard the progreſs of the deplorable diſeaſe, to mitigate the pain for a time, and to change the thin, ichorous, fetid diſcharge to a ſtate more approaching that of laudable pus. In different kinds of malignant ulcers, it in like manner mended the diſcharge, and diſpoſed the ulcer to heal. Some ſcrophulous tumours were completely reſolved by it, and the cure has ſtood for ſeveral ſeaſons: in other caſes of this kind, the patient has frequently ſuffered a relapſe, eſpecially in the ſpring. Dr. Fothergill obſerves, that the ſucceſs of this medicine depends on its being given in as large a doſe as the patient can bear; for otherwiſe, though continued for a length of time, it ſeldom procures any benefit: that the hemlock is in greateſt perfection when the flowers begin to fade, and the habit of the plant inclines to yellow; and that in making the extract, the leſs heat it undergoes, the better: that he has found twenty grains of one ſort of extract equal in point of efficacy to near forty of another: that the doſe is to be increaſed by degrees, till it produces certain effects, which ſeldom fail to ariſe from a dull doſe, and which for the moſt part are, either a giddineſs affecting the head, and motions of the eyes, as if ſomething puſhed them outwards; or a ſlight ſickneſs and trembling agitation of the body; or a laxative ſtool or two: that here we muſt ſtop till none of theſe effects are felt, and in three or four days advance a few grains more: that a greater quantity can commonly be borne at night than at noon, and at noon than in the morning: that the method he commonly follows is, to order two drams of the extract to be made into thirty pills, of which two are to be taken in a morning, two at noon, and three or four at night, and one pill added to each doſe, according as the patient can bear it: that the extract, given in this manner, is apparently anodyne; promotes reſt, and eaſes pain; ſeldom creates thirſt, or that kind of morning headach which ſucceeds an opiate; rarely occaſions coſtiveneſs, but in moſt procures a laxative ſtool the day following: that in ſome habits, very ſmall doſes offend the ſtomach, excite ſpaſmodic twitchings, heat, and thirſt; and that in ſuch caſes, its uſe is immediately forbid.

* In a paper of Dr. Fothergill's in Vol. 5th of the *London Med. Obſerv. and Inq.* the efficacy of extract of hemlock in a particular painful

affection of the face, is related. This diſeaſe is a ſudden violent pain attacking ſome part of the face, continuing a very ſhort time, and returning at irregular intervals, the nature and cauſe of which is not diſtinctly known. The Doctor was led, from ſome circumſtances, to conſider it as owing to a cancerous acrimony. In moſt of the caſes he met with, the cicuta, taken in ſufficient quantity, and long enough perſiſted in, removed the complaint.

* This remedy has likewiſe been ſtrongly recommended in the cure of the chincough, by Dr. Butter, in a treatiſe on that diſeaſe. He repreſents it as no leſs efficacious in this complaint, than bark in an ague; but the trials made by other practitioners do not ſeem to have confirmed this opinion.

* The following directions for preparing in the moſt perfect manner the extract of hemlock, are given by Dr. Withering in his *Botanical Arrangement of Britiſh Vegetables.* "Let ſeveral people be employed to gather the plant; and as faſt as it is cut, let others carry it in hand-baſkets to the preſs; but it muſt lie light and looſely in the baſkets. Let the juice be immediately ſqueezed out; and as faſt as it runs from the preſs, it muſt be put over the fire, and boiled till three parts out of four of the whole liquor is waſted. Then it muſt be put into a water bath, and evaporated to the conſiſtence of honey. If it is now taken and ſpread thin upon a board or marble ſlab, and expoſed to the ſun and the air, it will ſoon be of a proper conſiſtence to be formed into pills. From five to ten grains of this extract is a proper doſe; few conſtitutions will bear more without experiencing diſagreeable effects *(a)*."

The root of hemlock is generally ſuppoſed to be, both in external applications and when taken internally, of more activity than the leaves. Stœrck relates, that on being cut, it yields a bitter acrid milk, of which a drop or two, applied to the tip of the tongue, occaſioned a rigidity, pain, and ſwelling of the part, ſo as to prevent ſpeech; and that he was freed from this complaint, by waſhing and rubbing the tongue with citron juice. In drying, it ſeems to loſe of its virulence: he ſays he has taken a grain or two of the powder without injury: there are inſtances of twenty and thirty grains being given, with advantage, in ſcirrhuſes of the liver, *&c.* *(b)*, in quartan agues on the approach of a fit, and even

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(a) Vol. i. p. 163.

(b) Renealm, *Obſervat.* iii. & iv. Etmuller, *Schrœder dilucidat. par.* i. *ſect.* ii. *p.* 111.

in acute fevers(a). Nor does the freſh root appear to be at all times of equal virulence: I have ſeen it chewed freely, without any other effect being perceived, than an impreſſion of ſweetiſhneſs reſembling that of parſley roots or carrots: there are inſtances of ſome drams, and even ounces, having been taken, without producing any ill conſequence(b). So variable does this plant appear to be in its qualities; if really the ſubject of the ſeveral hiſtories was preciſely the ſame ſpecies of plant.

The ſeeds have been recommended by ſome as demulcent, paregoric, and antaphrodiſiac. Of their real qualities, little more is known with certainty, than that they are innocent to ſome kinds of birds: Mr. Ray ſays, he found the crop of a thruſh full of hemlock ſeeds, even at the ſeaſon when corn was plentiful.

* In the *Medical Commentaries*(c), it is aſſerted, that the extract prepared from the ſeeds of hemlock has been obſerved to be much more powerful than from the leaves. And in the laſt Edinburgh pharmacopœia, this is the only extract directed to be kept as an officinal.

CIMOLIA.

TWO ſorts of argillaceous earth are directed under this name in catalogues of the materia medica: CIMOLIA ALBA *ſeu Argilla alba Pharm. Edinb.*(d) the pure white ſtrong clay, called, from the uſe to which it is principally applied, Tobacco-pipe clay: and CIMOLIA PURPURASCENS *Pharm. Edinb.*(d) a compact bolar earth, commonly of a greyiſh brown colour, called, from its uſe, Fuller's earth.

THESE earths appear to be nearly of the ſame medical qualities with the boles formerly treated of; but are rarely or never employed, at leaſt under their own names, for any medicinal purpoſes. If the virtue of theſe kinds of ſubſtances depends, as it moſt probably does, on their ſoft viſcous quality, (for they do not appear to have any other, by which they can act in the bodies of animals) the white cimolia is obviouſly the moſt effectual of them all.

(a) Bowle, *apud Raium, hiſt. plant.* i. 451.

(b) Petiver, *Philoſoph. tranſact. Abr. Lowthorp.* ii. 641. Henley, *ibid.* Jungius, *Eph. nat. curioſ. dec.* i. *ann.* iv. *obſ.* 106. Trew, *Commerc. lit. Norimberg. ann.* 1740. *hebd.* 47.

(c) Vol. i. p. 326.

(d) Expunged.

CINARA.

CINARA; Scolymus. Cinara hortenſis Pharm. Edinb. Cinara hortenſis foliis non aculeatis C. B. Cynara Scolymus Linn. ARTICHOKE: a rough plant, with large greyiſh leaves, divided almoſt to the rib into irregularly indented ſegments: among theſe ariſes a thick ſtalk, bearing a large ſcaly head, which, opening at top, ſends out a number of purpliſh blue floſculi, followed by whitiſh ſeeds winged with down. It is perennial, a native of the ſouthern parts of Europe, and cultivated in our culinary gardens.

THE bottoms of the heads, and the fleſhy part of the ſcales, are ſuppoſed to be of eaſy digeſtion; but groſs, flatulent, and of little nouriſhment. The leaves are bitter, and give out their bitterneſs, along with their juice, on being bruiſed and preſſed. The expreſſed juice is given in dropſies, and in ſome inſtances has proved ſucceſsful after the medicines more commonly made uſe of in that diſorder had failed: for this purpoſe, the juice, not depurated, or freed only from its groſſer feculency by paſſing it through a coarſe ſtrainer, is mixed with equal its quantity of white wine, and three or four ſpoonfuls or more of the mixture taken every morning and evening. Its operation is chiefly by urine.

CINNABARIS.

CINNABARIS NATIVA. Minium Græcorum. NATIVE CINNABAR: a ponderous, red, ſulphureous ore of mercury; found in Spain, Hungary, and ſeveral other parts of the world. The fineſt is imported from the Eaſt Indies: partly in pretty large irregular maſſes; partly in ſmaller roundiſh ones, ſmooth without, and ſtriated within; both externally and internally of an elegant deep red colour, which is greatly improved by grinding the maſs into fine powder.

Cinnabar conſiſts of quickſilver and common brimſtone; in the proportion of not leſs than four(a), commonly ſix or ſeven(b) parts of the mercury, to one of the ſulphur: the finer its colour, the more mercury and the leſs ſulphur it is found to hold. The native cinnabar generally contains alſo a quantity of earthy matter, from which it may be purified by ſublimation. If this earth ſhould be of the calcareous kind, or if calcareous earths, iron filings, or other ſubſtances that abſorb ſulphur more ſtrongly than mercury does, be added; more or leſs of the ſulphur, proportionably to the quantity of ſuch abſorbent addition, will be detained at the bottom of the ſubliming veſſel: on this principle, the coarſer cinnabars may be freed from their redundant ſulphur as well as from their earthy matter, and thus rendered of a high colour: or the whole of the ſulphur may be detained, by an increaſe of the abſorbent material, and the pure mercury diſtilled off in its running form: one part of lime or iron filings is generally ſufficient for extricating all the mercury from four parts of cinnabar. The humid menſtrua, that diſſolve either one or the other of the ingredients of cinnabar by themſelves, have little effect upon the compound; the mercury being protected by the ſulphur from the action of acids, and the ſulphur by the mercury from that of alkaline liquors: alkalies indeed, even in the dry way of ſublimation, do not ſo perfectly detain the ſulphur as bodies of the earthy or metallic kind.

(a) Lemery, *Cours de chimie, part.* i. *chap.* viii. *operat.* 2.

(b) Cramer, *Elem. artis docimaſticæ, tom.* i. *edit.* ii. *p.* 287. Malouin, *Chimie medicinale, part.* iv. *chap.* 38.

Native cinnabar has by many been preferred, as a medicine, to that which is made by art, but apparently on no good foundation. The only difference between them conſiſts in this; that the native is ſubject to an admixture of heterogeneous matters, which are not perhaps always innocent (a); and that the proportions of its conſtituent ingredients are more precarious than in the factitious. The native cinnabar is therefore deſervedly rejected by the London and Edinburgh colleges.

CINNAMOMUM.

CINNAMOMUM Pharm. Lond. & Edinb. Cinnamomum ſive canella zeilanica C. B. Caſſia cinamomea Hermann. hort. Lugd. Bat. CINNAMON: the bark of a tree of the bay kind, *(Laurus Cinnamomum Linn.)*

(a) Accidit nonnunquam quod . . . nauſeas & vomitiones excitet, necnon etiam anxietates circa præcordia: quod & ipſe bis terve obſervavi, licet cinnabaris pluribus lotionibus purgata fuiſſet. *Geoffroy, mat. med.* i. 246.

growing in the iſland Ceylon; freed from the outer green or greyiſh part, and cut into long ſlices, which curl up, in drying, into quills or canes, the form in which it is brought to us; very thin, light, of a reddiſh yellow or pale ruſty iron colour, ſomewhat tough in breaking, and of a fibrous texture. It is frequently mixed with another bark, greatly reſembling it in appearance, but much weaker in virtue, *caſia lignea:* this laſt is diſtinguiſhed by the cloſe ſmooth ſurface which it exhibits on being broken, and by its remarkably ſlimy taſte.

THIS bark is one of the moſt grateful of the aromatics; of a very fragrant ſmell, and a moderately pungent, glowing, but not fiery taſte, accompanied with conſiderable ſweetneſs, and ſome degree of aſtringency. It is ſaid, that the fine flavour reſides, originally, only in the thin pellicle, which lines the interiour ſurface of the bark, and which abounds with veſicles of eſſential oil; the reſt of the bark, while freſh, being merely ſubaſtringent, and receiving the flavour, which we find it to have, from the inner pellicle in drying *(a)*. Accordingly the thinneſt pieces are found to be ſtrongeſt; as containing the largeſt proportion of this active part, and the leaſt of the inert woody matter.

Cinnamon, infuſed in boiling water in a cloſe veſſel, gives out to the fluid greateſt part of its virtue: together with a reddiſh brown tincture, deeper or paler, according to the proportion of cinnamon employed. Rectified and proof ſpirit extract its virtues more perfectly than water,
and without the aſſiſtance of heat; three ounces of the powdered bark, Tinctura
by cold maceration for a few days, give a ſtrong impregnation to a quart† cinnamomi † *Ph. Lond.*
or two pints and a half‡ of proof ſpirit. ‡ *Ph. Edinb.*

The aromatic principle of this ſpice is an eſſential oil; which, in diſtillation with water, riſes ſlowly and difficultly, and renders the liquor ſomewhat milky: the water continues to run milky, and gratefully impregnated with the fragrance of the cinnamon, till about a gallon Aq. cinnam.
has been drawn off from a pound: when large quantities of the ſpice ſimp. *Ph. Lond.&Edin.*
are ſubmitted to the operation at once, a ſmall portion of oil commonly
ſeparates and ſinks to the bottom of the water; in colour gold yellow; Ol. eſſent.
of a delightful ſmell like that of the cinnamon itſelf; and of a fiery cinnamom. *Ph. Lond,*
pungency, ſo as not to be ſafely taſted or applied to the ſkin without *& Edinb.*

(a) *Acta acad. cæſareæ nat. curioſ. vol.* i. *ann.* 1727. *Append. p.* 8.

dilution; for, as Boerhaave obſerves, it burns the part to a gangrenous eſchar: in doſes of a drop or two, diluted by the means of ſugar, mucilages, *&c.* it is one of the moſt immediate cordials and reſtoratives, in languors, ſingultuſes, and all debilities. If the milky diſtilled water be long kept, great part of the ponderous oil, ſuſpended in it, ſeparates and ſubſides: ſome, with a view to the perfection of the water, endeavour to prevent this ſeparation, by adding a ſmall proportion of ſugar, which contributes to keep the oil diſſolved: others, with a view only to the obtaining of the oil, endeavour to promote the ſeparation, by ſetting the liquor in a very cold place, and perhaps by other means not commonly known. It is ſaid, that from ſixteen ounces of good cinnamon, a dram and a half or two drams of oil have been collected.

The watery decoction, remaining after the diſtillation, yields, on being inſpiſſated, a mildly aſtringent maſs, which has nothing of the ſweetneſs, any more than of the peculiar flavour of the cinnamon. It is obſervable, that this extract is free from the nauſeous reliſh which moſt of the other ſpices diſcover, in a greater or leſs degree, when diveſted by the ſame means of their proper aromatic matter.

Rectified ſpirit, diſtilled from cinnamon, brings over very little of its flavour. An extract, made by this menſtruum, retains nearly all the valuable parts of the ſpice, the ſweet aromatic matter as well as the reſtringent: it has a durable and very grateful warmth and pungency, not a fiery heat like the ſpirituous extracts of many other ſpices; the heat and pungency of cinnamon reſiding in the pure eſſential oil. The quantity of this extract is about one ſixth of that of the cinnamon employed.

On diſtilling proof ſpirit from this ſpice, the purely ſpirituous part, which comes over firſt, proves almoſt flavourleſs, but the watery part which follows brings with it the eſſential oil; and this oil being diſſolved by means of the ſpirituous portion, the liquor proves limpid. A cordial water of this kind is commonly prepared in the ſhops, by drawing off a gallon † or nine parts ‡ of proof ſpirit from a pound of cinnamon. A like preparation might be obtained rather more advantageouſly, and free from the foreign flavour which the common proof ſpirits are accompanied with, by adding to the ſimple water a ſuitable quantity of pure rectified ſpirit.

Aq. cinnam. ſpiritu.
† *Ph. Lond.*
‡ *Ph. Edinb.*

Some other products of the cinnamon tree are uſed medicinally in the eaſtern countries, and have been ſometimes, though very rarely, brought into Europe; to wit, an aromatic eſſential oil diſtilled from the roots, and a ſpecies of camphor which ſeparates from this oil on rediſtilling it: an oil drawn from the leaves, ſimilar in flavour to the genuine oil of cloves with a little admixture of that of the cinnamon bark; and a whitiſh ſebaceous matter, ſaid to reſemble the expreſſed oil of nutmegs, obtained either by expreſſion or by coction in water from the fruit *(a)*.

Ol. caphuræ.

Caphura baros *Indorum*.

Oleum malabathri.

Cera cinnamomi.

CITREA.

CITREA MALUS Pharm. Edinb. *(b)* *Malus medica C. B.* *Citrus medica Linn.* Citron: a ſmall evergreen tree, reſembling the lemon, and differing from it chiefly in the fruit; which is much larger, leſs juicy, and contains, under the yellow rind, a thicker fungous white bark. It is a native of Aſia, and cultivated in the ſouthern parts of Europe.

This fruit has a near affinity with lemons in its medicinal qualities as well as in its external form: the principal difference lies, in the juice of the citron being ſomewhat leſs acid, and the yellow rind being ſomewhat hotter and accompanied with a conſiderable bitteriſhneſs. The rind gives out its virtue, equally with that of lemons, both to watery and ſpirituous menſtrua; but its flavour is not equally retained in the ſpirituous extract, the eſſential oil of citron peel being very light and volatile, ſo as in great part to riſe in diſtillation along with the higheſt rectified ſpirit. Several varieties of theſe trees are common in the warmer climates. Oils obtained from the freſh peels of the more odoriferous kinds, by rolling the fruit on a plane ſtuck full of points, are brought from Italy, and uſed as perfumes: theſe are ſomewhat more grateful, and conſiderably leſs pungent, than ſuch as are drawn by diſtillation with water. The oil prepared in either of theſe ways is very ſubject to loſe of its fine flavour, and become thick and reſinous in keeping: when diſtilled with rectified ſpirit, and afterwards ſeparated from the ſpirit by dilution with a large portion of water, it retains much longer its odour, fluidity, and limpidneſs.

Eſſentia de cedro *German.*

Ol. cedrinum *Pharm. Pariſ.*

(a) Albertus Seba, *Acta academiæ cæſareæ, ubi ſupra*, p. 11, 12.

(b) Expunged.

COCCINELLA.

COCCINELLA Pharm. Lond. Cochinilla Pharm. Edinb. Coccus Cacti Linn. COCHINEAL: little wrinkled grains, of an irregular figure, convex on one ſide and flat or ſomewhat hollowed on the other, externally of a dark red colour generally ſprinkled with a whitiſh clammy powder, internally of a deep bright red. This ſubſtance, brought from Mexico and New Spain, ſuppoſed formerly the ſeed of a plant, appears to be an inſect of the ſcarabæus kind, found adhering to the leaves and branches of the opuntia or American prickly pear tree, and carefully preſerved and cured by the natives. The male inſects have wings, and are about the ſize of a flea: the females have no wings, and are larger; when full of young, they become torpid, and ſwell ſo as on firſt ſight to reſemble berries, in which ſtate they are ſwept off with a pencil: if left till the young ones creep out, the parent dies, and its body becomes an empty huſk.

THE principal uſe of cochineal is as a colouring drug: it gives a fine deep durable red both to rectified and proof ſpirit, and a deep purpliſh crimſon to water: neither the watery or ſpirituous infuſions ſuffer any change of their colour on being inſpiſſated to the conſiſtence of an extract. Cochineal has been ſometimes uſed alſo in a directly medicinal view, and ſuppoſed to act as a mild corroborant and diaphoretic. It has a faint muſty kind of ſmell, and a very ſlight bitteriſh roughiſh taſte; both which are taken up, along with the colouring matter, by watery and by ſpirituous menſtrua, and, though ſcarcely perceptible in the dilute tinctures or infuſions, are very ſenſible in the inſpiſſated extracts, particularly in that made with ſpirit. Cartheuſer obſerves, that the mucilaginous bitteriſh watery extract amounts to three fourths of the weight of the cochineal; and the balſamic bitter and moderately aſtringent ſpirituous extract, to nearly as much.

COCHLEARIA.

SCURVYGRASS: a low plant; with thick juicy leaves, ſomewhat hollowed ſo as to reſemble a ſpoon, thoſe from the root ſtanding on long pedicles, thoſe on the ſtalk joined cloſe to it without pedicles; producing,

ducing, towards the upper part of the ſtalks, ſmall white tetrapetalous flowers, followed by roundiſh ſeed-veſſels. It is annual; grows wild in ſeveral parts of England, particularly about the ſea coaſts and ſalt marſhes; and flowers in May or ſooner.

1. COCHLEARIA HORTENSIS *Pharm. Lond. & Edinb. Cochlearia folio ſubrotundo C. B. Cochlearia officinalis Linn.* Garden or Dutch ſcurvygraſs: with the radical leaves unevenly roundiſh, and thoſe on the ſtalks oblong. It is commonly cultivated, for the uſe of the ſhops, in gardens; and does not appear, like many other maritime plants, to change its qualities with the ſoil.

2. COCHLEARIA MARINA *ſeu britannica. Cochlearia folio ſinuato C. B. Cochlearia anglica Linn.* Engliſh or ſea ſcurvygraſs: with all the leaves alike, oblong, pointed, deeply and irregularly indented or ſinuated.

THE freſh leaves of theſe plants have an ungrateful kind of ſmell, and a penetrating acrid taſte: the firſt ſort is conſiderably the ſtrongeſt, and hence has long ſuperſeded the uſe of the other. The flowers and ſeeds alſo are pungent, but leſs ſo than the leaves.

Scurvygraſs is a powerful antiſeptic, attenuant, and aperient: it manifeſtly promotes the ſenſible excretions, particularly urine, without heating or irritating ſo much as might be expected from its great pungency. It is one of the capital antiſcorbutic herbs, and in this intention has been principally made uſe of, in conjunction, generally, with mild vegetable acids, or ſubſtances of leſs acrimony, as orange juice, ſorrel, becabunga, *&c.* It is of ſervice alſo in paralytic and cachectic indiſpoſitions; and in the wandering rheumatic pains, of long continuance, unaccompanied with a fever, called by Sydenham the ſcorbutic rheumatiſm. I have had frequent experience of the efficacy of the compoſition which he preſcribes in this commonly obſtinate diſtemper, and which, he ſays, if the public had not outweighed private advantage, he ſhould have concealed; to wit, ſixteen parts of freſh made conſerve of garden ſcurvygraſs, eight of conſerve of wood ſorrel, and ſix of the compound powder of arum root, made up with ſyrup of orange peel into an electary, of which two drams are to be taken thrice a day for a month, along with ſome ounces of a diſtilled water impregnated with ſcurvygraſs, mint, nutmegs, *&c.*

&c. Among different aromatic materials made trial of for covering the ill flavour of ſcurvygraſs, nutmegs ſeemed to anſwer the beſt. Inſtead of the compound powder of arum in the above compoſition, an equal quantity or more of freſh arum root, mixed with as much powdered gum-arabic, may be advantageouſly ſubſtituted; and probably the virtues of the medicine depend as much upon this root as on the ſcurvygraſs.

The active matter of this plant is extracted by maceration both in watery and in ſpirituous menſtrua, and accompanies the juice obtained by expreſſion. The moſt conſiderable part of it is of a very volatile kind; the peculiar penetrating pungency totally exhaling, in the exſiccation of the herb, and in the evaporation of the liquors; and only a ſlight biting bitteriſhneſs remaining in the dried leaves, in the inſpiſſated juice, and in the ſpirituous as well as in the watery extracts. The freſh leaves, beaten into a conſerve with thrice their weight of fine ſugar, may be kept in a cloſe veſſel, without much diminution of their virtue, for years. The juice alſo, purified from its feculencies by ſettling and ſtraining, may be preſerved for a conſiderable time, though by no means equally with the conſerve, by ſetting it in a cool place, and covering the ſurface with a little oil to prevent the acceſs of air. The orange or ſorrel juice, commonly added to that of the ſcurvygraſs, ſeem to promote the depuration; for if the juices, ſeparately, are made moderately fine, they ſoon depoſite, on being mixed together, a freſh feculence.

Conſerv.fol. cochl. hort. *Ph. Lond.*

The principal virtue of this plant reſides in an eſſential oil; ſeparable, in very ſmall quantity, by diſtillation with water. The oil is ſo ponderous, as to ſink in the aqueous fluid; but of great volatility, ſubtility, and penetration. One drop, diſſolved in ſpirit, or received on ſugar, communicates to a quart of wine or other liquors the ſmell and taſte of ſcurvygraſs. It riſes in diſtillation with rectified ſpirit as well as with water: a pint of rectified ſpirit, drawn off, in the heat of a water bath, from two pounds of the freſh herb bruiſed, brings over nearly all the oil, and proves exceeding ſtrongly impregnated with the volatile pungency of the ſcurvygraſs. Both the oil and the ſpirit, particularly the former, require the bottles they are kept in to be very carefully ſecured; the ſubtile matter of the plant, when thus diſengaged by diſtillation from the groſſer parts, being extremely diſpoſed to eſcape.

COFFEA.

COFFEA Ph. Ed.(a) Coffee: a pale coloured oval ſeed, ſomewhat ſmaller than a common bean, convex on one ſide, flat on the other with a remarkable furrow. It is the produce of a tree of the jaſmine kind, *(jaſminum arabicum caſtaneæ folio, flore albo odoratiſſimo, Commelin. hort. amſt. Coffæa arabica Linn.)* growing in Arabia, and thence introduced into the Weſt Indies: the fruit is a juicy berry, including two of the ſeeds, joined by the flat ſides, and covered each with a thin ſhell.

Coffee ſeeds have a farinaceous, ſomewhat unctuous, bitteriſh taſte, and little or no ſmell: the flavour, for which they are valued, is procured by gentle roaſting; and ſome of our own ſeeds and kernels acquire, by that proceſs, a flavour ſomewhat of the ſame kind. The roaſted ſeeds, ground into powder, ſoon loſe their flavour in the air, impart it to water and ſpirit by ſlight coction or digeſtion, and give over great part of it with water in diſtillation. An extract made from them by water is, not diſagreeably, bitteriſh: an extract made by rectified ſpirit is ſtronger, and not a little nauſeous.

The dietetic uſe of coffee is ſaid to ſtrengthen the ſtomach and promote the ſecretions; to be ſerviceable in phlegmatic corpulent habits; to be injurious in thin habits and bilious temperaments, in melancholic and hypochondriacal diſorders, and to perſons ſubject to hemorrhages.

* From ſome experiments related by Dr. Percival in Vol. II. of his *Eſſays Medical and Experimental*, it appears that coffee is ſlightly aſtringent and antiſeptic; that it reſtrains fermentation; and has a powerful ſedative action on the nervous ſyſtem. Sir John Pringle, in a letter to the ſame author, recommends ſtrong coffee as the beſt abator of the paroxyſms of the periodic aſthma with which he is acquainted. He directs for this purpoſe an ounce of beſt Mocha coffee to be made into a ſingle diſh, to be repeated freſh after the interval of a quarter or half an hour, and drunk without milk or ſugar.

(a) Expunged.

COLCHICUM.

COLCHICUM: Colchicum autumnale Stœrck. & Linn. Colchicum commune C. B. Colchicum anglicum purpureum & album Ger. & Park. MEADOW SAFFRON: a plant with a fleſhy bulbous root, producing from its lower part a ſmaller bulb: from this laſt ariſes, in autumn, along a furrow in the ſide of the old root, a ſlender hollow tranſparent pedicle, widening at top into a flower like thoſe of the crocuſes, divided into ſix ſegments, of a purpliſh or whitiſh colour, withering in two or three days: from the ſame root, next ſpring, come forth three or four upright leaves, like thoſe of the lily; in the middle of which appear, on ſhort pedicles, commonly three triangular pods, about the ſize of ſmall walnuts, divided into three cells full of roundiſh dark-coloured ſeeds. It grows wild in rich moiſt meadow grounds in the ſouthern and weſtern parts of England. The roots, freed from the outer blackiſh coat and the fibres at bottom, are while freſh of a white colour, and full of a milky juice; in drying they become wrinkled, and of a blackiſh or dark reddiſh brown.

THIS is one of thoſe plants, whoſe violent and ſingular effects in the bodies of animals engaged the attention of Dr. Stœrck; in hopes that by giving it in very ſmall doſes, or by due preparation, it might be converted into a medicine not only ſafe, but capable of relieving diſorders in which the common remedies prove ineffectual. He obſerves, that on cutting the freſh root into ſlices, the acrid particles emitted from it irritate the noſtrils, fauces, and breaſt, and that the ends of the fingers with which it had been held become for a time benumbed: that applied for two minutes to the tip of the tongue, it rendered the part rigid and almoſt void of ſenſation for ſix hours: that leſs than a grain, wrapt up in crumb of bread and taken internally, produced alarming ſymptoms, a burning heat and pain in the ſtomach and bowels, ſtrangury, teneſmus, thirſt, total loſs of appetite, *&c.* which were greatly relieved by an acidulous mixture with ſyrup of poppies, and which on the fourth day went entirely off: that an infuſion of three grains of the root in four ounces of wine, ſlowly ſwallowed, occaſioned a tickling in the larynx and ſhort dry cough, ſoon after a heat in the urinary paſſages and a copious diſcharge of pale urine, without ſenſibly affecting the other functions of the body: that an ounce of the ſliced juicy root being digeſted with a gentle heat in a pound of vinegar for forty-eight hours, and the bottle frequently ſhaken; the root became almoſt inſipid, and the ſtrained vinegar proved acrid in taſte, irritated and conſtringed the fauces, and raiſed a ſhort cough: that this vinegar, mixed with twice its quantity of honey, and gently boiled down to the conſiſtence of honey (frequently ſtirring the mixture with a wooden ſpoon) proved a ſufficiently grateful oxymel, which taken in doſes of a tea-ſpoonful, that is, a dram, promoted a copious diſcharge of urine, without inconvenience. After theſe experiments on himſelf, he made trial of this oxymel, in the hoſpital at Vienna, in deſperate hydropic and other ſerous diſorders, in which it was always found to act without diſturbance, as a moſt potent diuretic, after the common medicines employed in that intention had failed. He begins with giving a dram twice a day in any ſuitable vehicle, and gradually increaſes the doſe to an ounce and ſometimes an ounce and a half in a day: if this laſt quantity ſhould prove ineffectual, he thinks there are little hopes of any benefit from this medicine. *The Edinburgh college have now received into their pharmacopœia a ſyrup of colchicum, made with the ſame infuſion of the root in vinegar as above deſcribed, in which are diſſolved twenty-ſix ounces of fine ſugar.

Oxymel colchicum.

Syr. colchici *Ph. Edinb.*

COLOCYNTHIS.

COLOCYNTHIS Ph. Edinb. Colocynthidis medulla Ph. Lond. Coloquintida: the dried medullary or pulpy part of a ſpecies of gourd or cucumber, *(Cucumis Colocynthis Linn.)* brought from Aleppo. It is very light, white, of a fungous texture, compoſed as it were of membranous leaves, with a number of roundiſh ſeeds lodged in the cavities.

The fungous medulla, freed from the ſeeds, (which are ſomewhat unctuous and ſweetiſh, like thoſe of the common cucumber) has a nauſeous, acrid, intenſely bitter taſte. It is a very ſtrong irritating cathartic; commended by ſome, not only as an efficacious purgative, but likewiſe as an alterative in obſtinate chronical diſorders; by others condemned, as a dangerous and deleterious drug. Thus much is certain, that when given by itſelf, in ſubſtance, in ſuch doſes as to purge effectually, as eight or twelve grains, it operates for the moſt part with great vehemence; diſordering the conſtitution, occaſioning violent gripes and ſometimes bloody diſcharges. Its principal uſe is as a ſtimulus to other purgatives.

Colocynth, boiled in water, renders a large quantity of the liquor ropy and ſlimy: even a tincture of it made in proof ſpirit is ſo glutinous, as not to paſs through a filter, and not eaſily through a common ſtrainer. The watery decoctions inſpiſſated, yield a large proportion, half the weight of the colocynth or more, of a mucilaginous extract; which purges ſtrongly, but with much leſs irritation, and greater ſafety than the colocynth itſelf, and appears to be the beſt preparation obtainable from this draſtic drug. The college of Edinburgh uſes a ſoft extract of Pil. Rudii. this kind, made from coloquintida and black hellebore, for mixing into pills with ſcammony and aloes (a); that of London directs a tincture of Extract. cathart. the coloquintida in proof ſpirit, in which the ſcammony and aloes are to be diſſolved, and the whole inſpiſſated together. Both theſe forms are greatly preferable to thoſe in which the colocynth in ſubſtance is joined to the ſame materials.

*COLUMBO.

COLOMBA radix Ph. Edinb. *Calumba Redi Exper. nat.* A root brought from Columbo, a town in the iſland of Ceylon, to which it was originally tranſplanted from the continent of India. It is called by the Portugueze *Raijs de Moſambique*. We are as yet unacquainted with the vegetable of which it is a part.

Columbo root comes to us in circular pieces, which are from half an inch to three inches in diameter, and from two inches to one quarter of an inch in length. The ſides are covered with a thick wrinkled bark, of a dark brown colour externally, but of a light yellow within. The ſurfaces of the tranſverſe ſections appear very unequal, higheſt at the edges, with a concavity towards the center. On paring off this rough ſurface, the root is ſeen to conſiſt of three lamina, the cortical, ligneous, and medullary. This laſt is much the ſofteſt, and when chewed ſeems very mucilaginous. A number of ſmall fibres run longitudinally through it, and appear on the ſurface. The cortical and ligneous parts are divided by a circular black line. All the thicker pieces have ſmall holes drilled through them, for the convenience of drying.

(a) Expunged.

THIS root has an aromatic ſmell, but is diſagreeably bitter and pungent to the taſte, ſomewhat reſembling muſtard-ſeed long kept.

From a number of pharmaceutical experiments on the columbo root, it appears to give out its virtues more completely to ſpirituous, than to watery menſtrua. The watery infuſion is more periſhable than that of other bitters. A copious precipitation takes place in it in twenty-four hours; and in two days it becomes ropy and muſty. By the united action of water and rectified ſpirits, an extract weighing eight ounces and two drams was obtained from twelve ounces of the root. This extract is found to retain the entire flavour of the columbo, and to be equal, if not ſuperiour, in virtue to the powder of the root. The antiſeptic power of an infuſion of columbo, upon animal fleſh, was found to be leſs than that of Peruvian bark; but its efficacy in correcting and preventing the putridity of the bile, appeared to be ſuperiour to that of bark or chamomile flowers. Columbo conſiderably checks the progreſs of fermentation in alimentary mixtures; and neutralizes a large proportion of acid. It has little or no aſtringency.

The columbo root has long been a medicine in repute among the natives of the countries which produce it, in diſorders of the ſtomach and bowels. They carry it about with them, and take it, ſliced or ſcraped, in Madeira wine. Our practitioners in the Eaſt Indies adopted the uſe of it from them; and frequently found it of great ſervice in the *cholera morbus*, ſo common and fatal in thoſe hot climates. It was obſerved to ſtop the violent vomiting in this complaint, more ſpeedily and effectually than any other remedy; an effect attributed to its property of correcting the putrid diſpoſition of the bile. It was, however, little known or regarded in this country, till Dr. Percival, in his *Eſſays Medical and Experimental*, Vol. II. publiſhed obſervations and experiments on this root, (from which the ſubſtance of this article is taken) with caſes of its efficacy in various diſeaſes depending on the ſtate of the bile; as the bilious colic, bilious fevers, diarrhœas, habitual vomitings, &c. The experience of other practitioners has confirmed its utility in theſe caſes. The doſe of the powder uſually employed has been from one to two ſcruples.

CONESSI.

CONESSI Med. eſſ. edinb. Codago-pala Hort. malabar. Ph. Pariſ. Conessi: the bark of a ſmall tree, *(Nerium antidyſentericum Linn.)* growing in the iſland Ceylon and Malabar; of a dark blackiſh colour on the outſide, covered more or leſs with a white moſs or ſcurf: the bark of the ſmall young branches, which has the leaſt of this matter, is preſerved. It has but lately been introduced into Europe, and is as yet little known in the ſhops.

This bark, to the taſte gratefully auſtere and bitter, is recommended in the Hortus Malabaricus for the cure of diarrhœas; and its efficacy in this diſorder has been confirmed in the Edinburgh medical eſſays. The bark, freed from the ſcurf, is directed to be made into an electary with ſyrup of oranges, and taken to the quantity of half a dram or more four times a day: it ſenſibly loſes of its roughneſs and its virtue if kept for two or three days, in the form either of powder or electary; and hence freſh quantities are to be prepared at leaſt every other day. It is ſaid, that the firſt day of taking the medicine, it increaſes the number and quantity of the ſtools, without increaſing the gripes; that on the ſecond day, the colour of the ſtools is mended; and that on the third or fourth day, if it ſucceeds at all, the conſiſtence generally comes near to a natural ſtate: that in recent diarrhœæ, from irregularities, it ſeldom fails to cure, if a vomit, of ipecacoanha, is given immediately before its uſe: that the ſame management ſucceeds in perſons of a lax habit, to whom diarrhœæ are familiar in moiſt weather: but that, in any caſe, if a fever is joined, the coneſſi has no place till the fever is removed. Mr. Monro informs us, in the Eſſays above mentioned, that he cured a dyſentery of three years ſtanding, which had reſiſted a great variety of other medicines, by giving this bark in the form above preſcribed.

CONSOLIDA.

CONSOLIDA major ſive Symphytum majus Ph. Edinb.(a) *Symphytum conſolida major C. B. Symphytum officinale Linn.* Comfry: a rough plant; with large, ſomewhat oval, pointed leaves; producing, on the tops of the branches, ſpikes of white or purpliſh, pendulous, nearly cylindrical flowers, followed each by four ſhining black ſeeds: the root is thick and fleſhy, black on the outſide and white within. It is perennial, grows wild in moiſt grounds, and flowers in May or June.

(a) Expunged.

THE roots of comfry abound with a viſcid glutinous juice, of no particular taſte or flavour. The dried root, boiled in water, renders a large proportion of the fluid ſlimy: the decoctions, inſpiſſated, yield a ſtrong flavourleſs mucilage, ſimilar to that obtained from althea, but ſomewhat ſtronger-bodied or more tenacious, and in ſomewhat larger quantity, amounting to about three fourths the weight of the comfry. From this analyſis it may be preſumed, that the conſolida, though rarely employed in practice, is rather ſuperiour to the althea in the ſeveral intentions in which that root is made uſe of; the mucilaginous matter being, in both roots, the only medicinal principle.

CONTRAYERVA.

CONTRAYERVA Pharm. Lond. & Edinb. CONTRAYERVA: the root of a ſmall plant (*dorſtenia ſphondylii folio, dentariæ radice, Plum. gen. dorſtenia contrayerva Linn.*) growing in Peru and other parts of the Spaniſh Weſt Indies. The root is an inch or two in length, and about half an inch thick; full of knots and irregular tubercles; ſurrounded on all ſides with numerous long tough fibres, moſt of which are loaded with ſcaly knobs; of a reddiſh brown colour on the outſide, and pale within. It was firſt brought into Europe, about the year 1581, by Sir Francis Drake, whence its name *Drakena radix.*

THIS root, freed from the fibres, which are much weaker than the tuberous part, has a light aromatic ſmell; and a roughiſh, bitteriſh, penetrating taſte, which, as Fuller obſerves, is not eaſily concealed by a large admixture of other ſubſtances. It is given, as a diaphoretic and antiſeptic, in low and malignant fevers, and appears to be one of the mildeſt and ſafeſt of the ſubſtances of the pungent kind commonly made uſe of in theſe intentions; not being liable to produce, though taken pretty freely, any conſiderable heat. The doſe, in ſubſtance, is from five or ſix grains to half a dram and more; in decoction or infuſion, from half a dram to two drams.

Contrayerva root gives out its virtue, by the aſſiſtance of heat, both to water and rectified ſpirit; and tinges the former of a dark-browniſh red, the latter of a brighter reddiſh colour: the watery decoction is very mucilaginous, ſo as not to paſs through a filter. In diſtillation or evaporation, pure ſpirit elevates nothing, and water very little of its virtues; the active matter of this root being of the fixt kind, and remaining nearly entire in the watery as well as in the ſpirituous extracts. The extract made by rectified ſpirit taſtes ſtrongly of the contrayerva, and leaves in the mouth a durable, glowing, vibrating kind of pungency, like that of peppermint, but far milder: its quantity is about three drams from ſixteen of the root. The quantity of watery extract is more than double to that of the ſpirituous, and its taſte proportionably weaker.

COPAL.

COPAL Pharm. Edinb.(a) COPAL: ſuppoſed to be a reſinous concrete, obtained from certain large trees growing in New Spain; more probably a mineral bitumen, analogous to amber. It is brought to us in irregular maſſes; ſome of which are tranſparent, and of all the intermediate ſhades of colour from a very light yellow to a gold colour and a deep brown; others are whitiſh and ſemitranſparent. In the middle of ſome of the maſſes is found a cavity containing ſome drops of a clear ſaline liquor: in others, inſects and vegetable matters are incloſed*(b)*.

THESE concretes, however various in appearance, are in quality very nearly if not entirely alike. They have a more agreeable ſmell than frankincenſe, to which ſome have reſembled them, and when laid on a red-hot iron, they do not melt ſo thin, or burn away ſo faſt. They do not ſoften in the mouth on being chewed, like anime, with which they have been confounded by others. From thoſe, and from all the other known reſinous bodies, they differ more remarkably, in being exceeding difficultly diſſoluble in rectified ſpirit of wine, and yielding in diſtillation an oil which like the mineral petrolea is alſo indiſſoluble in ſpirit; in being readily diſſolved by the concentrated vitriolic acid,

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(a) Expunged.

(b) Memoires de l'acad. roy. des ſcienc. de Berlin, pour l'ann. 1758.

and eſſential oils, not by expreſſed oils, or volatile or fixt alkalies. Though pure ſpirit of wine, by moderate digeſtion, ſeems to have little action on copal; a boiling heat, or long agitation, enables it to take up a conſiderable portion: the undiſſolved part is tenacious and white: the filtered ſolution is of a gold yellow colour, in taſte at firſt ſweetiſh, afterwards agreeably aromatic, inclining to bitter. It is ſaid that ſpirit of wine ſaturated with camphor diſſolves the copal more eaſily than pure ſpirit. The medicinal effects of this bitumen are not much known, as it has never been much in uſe: it is recommended as a warm corroborant; and may be preſumed to be ſimilar to amber.

CORALLINA.

CORALLINA Pharm. Edinb.(a) *Muſcus maritimus ſive corallina officinarum C. B.* CORALLINE: a marine production, common on rocks, ſhells, *&c.* reſembling a ſmall plant without leaves; conſiſting of numerous ſlender jointed branches, generally of a greyiſh or whitiſh colour, ſometimes greeniſh, yellowiſh, reddiſh, or blackiſh; of a brittle ſtony ſubſtance, friable betwixt the fingers, and crackling between the teeth. It has been commonly ſuppoſed a vegetable; but late obſervations afford grounds to believe, that it is of an animal origin: it is apparently the habitation, and probably the production, of marine polypi.

POWDERED coralline has been celebrated in doſes of from half a ſcruple to a dram, as an anthelmintic; probably on too ſlight foundation. As uſually met with in the ſhops, it has no ſmell, and very little if any taſte. It is almoſt wholly diſſolved by aqua fortis, is precipitated from this acid by the admixture of the vitriolic, and by calcination in a ſtrong fire becomes a true quicklime; proofs that it conſiſts chiefly of an abſorbent calcareous earth, and that it is of the ſame general nature with crabs-claws, oyſter-ſhells, and other teſtaceous marine bodies.

CORALLIUM.

CORALLIUM rubrum Pharm. Lond. RED CORAL: a hard, brittle, branched ſubſtance, reſembling the ſtalk of a plant; uſually about the thickneſs of a gooſe quill; full of knots; ſometimes ſtraight, and ſometimes variouſly bent; both externally and internally of a deep bright red colour. It is found adhering to rocks and other bodies in the ſea, particularly in the Mediterranean; covered with a ſoft fungous bark, in which is a great number of cells curiouſly divided, containing a milky juice, with apertures on the ſurface: this cortical part is ſeparated while freſh and ſoft. It has been generally referred to the vegetable kingdom; but is more probably, like the preceding, the work and the neſt of little animals.

(a) Expunged.

Red coral appears to have for its baſis the ſame calcareous animal earth as the corallines and the ſhells of ſea fiſhes: like them, it is changed by calcination into quicklime, diſſolves in all acids except the vitriolic, and is precipitated by this laſt from its ſolutions made in the others. It is uſed alſo, like thoſe productions, as an abſorbent of acid humours in the firſt paſſages; and like them, when ſatiated with ſuch acids as are generated in the bodies of animals, it forms therewith a reſtringent ſaline compound. That it has any virtues diſtinct from thoſe of the other calcareous abſorbents, or that it is ſuperiour in abſorbent power to the cheaper teſtaceous bodies, there are no grounds to ſuſpect.

Corallium præparatum *Ph. Lond.*

The levigated coral is ſometimes counterfeited in the ſhops with the common teſtacea coloured with dragons blood or red bole. Theſe abuſes may be diſcovered, by ſhaking the powder with water and ſuffering it to ſettle, when the white and the coloured matter will ſeparate from one another and appear in great part diſtinct: dragons blood may be known likewiſe by its giving a red tincture to ſpirit of wine; and bole, by its retaining its redneſs in the fire, whilſt coral burns white.

CORIANDRUM.

CORIANDRUM Pharm. Lond. & Edinb. Coriandrum majus C. B. Coriandrum ſativum Linn. Coriander: an umbelliferous plant, with finely divided leaves; producing pale yellowiſh or browniſh, ſtriated, hemiſpherical ſeeds, which are joined, by the flat ſides, two together. It is annual, a native of Italy, and cultivated in ſome parts of England.

The leaves of coriander have a ſtrong ſmell, ſomewhat of the aromatic kind, but not a little diſagreeable. The ſeeds alſo have, when freſh, a very unpleaſant flavour, which by drying is altered and becomes tolerably grateful: their taſte, in this dry ſtate, is moderately warm and ſlightly pungent.

The dried ſeeds are ſometimes employed as a ſtomachic and carminative, though leſs frequently than the other warm ſeeds. They give out their virtue totally to rectified ſpirit, but only partially to water: the ſpirituous tincture is of a pale bright yellow colour, the watery infuſion of a deeper browniſh. In diſtillation with water, they yield a ſmall quantity of a yellowiſh eſſential oil, which ſmells ſtrongly and pretty agreeably of the coriander. Pure ſpirit likewiſe carries off, in evaporation or diſtillation, great part of their flavour; the ſpirituous extract proving, in taſte as well as in ſmell, conſiderably weaker than the tincture uninſpiſſated.

CORNU CERVI.

CORNU CERVI Pharm. Lond. Hartshorn: large branched horns of the hart or male red deer. The horns uſually met with in the ſhops are thoſe of the common or fallow deer.

Hartshorn, raſped or ſhaved, gives out to water, by boiling, a ſoft gelatinous matter, of ſcarcely any particular flavour, amounting, when inſpiſſated, to about one fourth the weight of the horn. The decoction and gelly are ſometimes directed in diarrhœas and other diſorders, partly as affording a mild nutriment, and partly for obtunding and incraſſating acrimonious thin humours. An elegant hartſhorn gelly is prepared, by boiling half a pound of the ſhavings in three quarts of water till two parts are waſted, and adding to the ſtrained liquor an ounce of Seville orange or of lemon juice, a quarter of a pint of mountain wine, and half a pound of fine ſugar; and boiling down the mixture to a due conſiſtence. Compoſitions of this kind are very grateful to many in acute diſeaſes.

On diſtilling the horn with a red heat, it gives over a volatile ſalt and ſpirit, together with a fetid empyreumatic oil. The ſame products are obtainable, in greater or leſs quantity, from all animal ſubſtances, though thoſe prepared from hartſhorn have been in moſt general uſe: ſee *Sal alkalinus volatilis.*

Cornu cervi philoſophice præparatum.

Cornu cervi calcinatum *Ph. Lond.*

The horns, ſo far freed from their gelatinous matter as to be pulverable, either by boiling them in water or by expoſing them to its ſteam, have been uſed by ſome in the ſame intentions as the abſorbent earths: by calcination in a ſtrong fire, with the free admiſſion of air, their earthy part may be obtained in a much purer ſtate, in quantity about one half of the weight of the original horn. The calcination may be performed in a potter's furnace; or by ſtratifying the horns with charcoal in any common furnace or ſtove, and ſetting the whole on fire together: the horns, after the burning, retain their figure, and a conſiderable degree of hardneſs, ſo as to be eaſily ſeparable from the aſhes into which the vegetable coal is reduced. The horns remaining after the diſtillation of the volatile ſalt are as proper for this uſe as freſh ones.

The pure earth of hartſhorn differs from that of coral and the teſtacea, in not being convertible into quick lime; and agrees with them, in being diſſoluble by the vegetable, nitrous, and marine acids, and in being precipitated from theſe acids on the addition of the vitriolic. The earth of the horns, and of the bones alſo, of other animals, appears to be of the ſame nature with that of hartſhorn. How far this ſpecies of earth differs from the others in its medicinal effects, is little known. It is cuſtomary, in acute diſeaſes accompanied with a looſeneſs, to impregnate the common drink with the calcined hartſhorn levigated into an impalpable powder, on a ſuppoſition of its acting as a mild reſtringent: ſolutions of it in vegetable acids are apparently reſtringent, as they diſcover a degree of auſterity to the taſte; but the pure earth is inſipid, ſo that probably it tends to reſtrain fluxes only in conſequence of its uniting with acid humours in the firſt paſſages. Hoffman reports, that this earth, when combined with acids, is more diſpoſed, than the other abſorbents, to promote perſpiration.

COSTUS.

COSTUS Ph. Lond. Coſtus dulcis officinarum C. B. Coſtus arabicus Linn. Costus: a root, brought from the Eaſt Indies, about the ſize of the finger, of a pale greyiſh or whitiſh colour on the outſide, and yellow within. An *Arabian*, a *bitter*, and a *ſweet* coſtus were formerly diſtinguiſhed in the ſhops: whether they were, as ſome ſuſpect, the roots of different plants, or, as others, of one and the ſame plant in different ſtates, does not fully appear. At preſent, only one ſort is met with, and this but rarely.

This root has been recommended as a ſtomachic, uterine, diaphoretic, and diuretic. The editor of the Wirtemberg pharmacopœia obſerves, that it impregnates the urine, like the turpentines, with a violet ſmell. The ſmell of the root itſelf approaches to that of violets or Florence orris: its taſte is warm and bitteriſh. Both the ſmell and taſte are confined chiefly to the brittle cortical part, the internal tough woody matter having very little of either.

Decoctions of coſtus in water are of a browniſh colour, a bitter taſte, and leſs grateful ſmell than the root in ſubſtance: in evaporation they diffuſe a very diſagreeable ſcent: the inſpiſſated extract is moderately bitter, of ſcarcely any particular flavour, in quantity amounting to no leſs than two thirds the weight of the root; in keeping, it ſoon grows mouldy, and duſty on the ſurface. The ſpirituous tincture is of a bright yellow colour, a bitter aromatic taſte, and a more agreeable ſmell than the watery decoction; inſpiſſated, it yields a very warm pungent, bitter extract, of an aromatic flavour, leſs grateful than that of the coſtus itſelf, in quantity not exceeding one ninth the weight of the root.

CRETA.

CRETA Ph. Lond. & Edinb. Chalk: a pure white mineral calcareous earth, met with in moſt parts of the world, of various degrees of hardneſs. The ſofter maſſes, included in ſea ſhells (which are commonly in chalk pits) called from their figure chalk eggs, are by many preferred to the others for medicinal uſe.

There are innumerable concretes in the mineral kingdom, of the ſame general nature with chalk; or which conſiſt chiefly, or wholly, of the ſame earth, formed into maſſes, which differ from one another little otherwiſe than in their external appearance, compactneſs, or texture. Such are the *limeſtones*; the *marbles*; ſome of the *marles*; the fine earth called *agaricus mineralis*, *medulla ſaxi*, or *lac lunæ*: the tranſparent cryſtalline concretes called *ſpars*; moſt of the *petrefactions*; and moſt of the

ſtalactitæ,

ſtalactitæ, or the earthy matter, which, in its concretions from waters, incruſtates the ſides of caverns, or hangs in icicles from the tops. Many of theſe bodies were formerly introduced into medicine, from an erroneous ſuppoſition of their poſſeſſing diſtinct qualities: chalk, one of the pureſt of them, is the only one now retained in practice; nor would the art ſuffer any detriment, if a like reduction was made in the analogous bodies furniſhed by the animal kingdom.

The diſtinguiſhing characters of this earth, in all its forms, are, its not diſſolving in the vitriolic acid, though readily diſſolving in all the others; its being precipitated by the vitriolic acid from its ſolutions in the others, and being thus changed into a ſelenites; its being convertible, by calcination with a ſtrong fire, into quicklime; and its melting eaſily, with certain vitrefactive fluxes, as borax, into a tranſparent glaſs. In this laſt property it differs from the calcareous animal earths; which appear to be unvitreſcible, communicating, to a large proportion of vitreous matters, an opake milkineſs.

Julepum e creta *Ph. Lond.*

Pulv. Cretaceus *Ph. Edinb.*

PURE chalk is a very uſeful abſorbent in cardialgic and other complaints from acidities in the firſt paſſages. For this purpoſe it is formed, in the ſhops, into troches, with ſugar and a little nutmeg, and generally with the addition of ſome of the other abſorbent earths, which add nothing to its virtue; and into juleps, by mixing the chalk, levigated into a ſubtile powder, with water, in the proportion of half an ounce to a pint; with the addition of two drams of ſugar, and one dram of gum-arabic, to give ſome conſiſtence to the liquor, ſo as to enable it to keep the powder ſuſpended. *The Edinburgh college have now directed a powder, conſiſting of four ounces of prepared chalk, with a dram and a half of nutmeg and a dram of cinnamon, to ſupply the place of the cardialgic troches.

When chalk is combined with ſuch acids, as may be deemed moſt analogous to thoſe which are preternaturally generated in the human ſtomach, as ſour milk and ſour vegetable liquors; the compounds prove ſomewhat more auſtere than thoſe reſulting from the coalition of the ſame acids with the animal abſorbents: hence chalk, given in caſes of acidities, is generally obſerved to bind the belly more; and thus to prove more injurious in coſtive habits, and more beneficial in fluxes: two drams given in a doſe, and repeated at proper intervals, have often effected a ſpeedy cure both in ſimple diarrhœæ and in dyſenteries. But that it has any aſtringent power, as many have ſuppoſed, independently of its combination with acids, or in diſorders where there are no acid juices in the firſt paſſages to diſſolve it, is not ſo clear: the ſenſe of aſtringency, which the chalk in ſubſtance produces in the mouth, appears to proceed, like that of the bolar earths, only from its adhering to the part and imbibing its moiſture.

CROCUS.

CROCUS Ph. Lond. & Edinb. Crocus ſativus C. B. & Linn. Crocus autumnalis ſativus Moriſon. hiſt. SAFFRON: a bulbous-rooted plant, with narrow graſs-like leaves which have a white line running along the middle: the ſtalk is ſhort and undivided, and bears on the top a purpliſh blue flower, deeply cut into ſix ſegments; in the middle of the flower ariſes, among the ſtamina, a whitiſh piſtil, divided at the top into three ſtigmata or fleſhy filaments, the lower part of which is ſlender and pale coloured, the upper broader, of a deep orange red, and very finely indented about the ſides: theſe filaments, carefully picked, moderately dried in kilns, and preſſed together into cakes, are the ſaffron of the ſhops. The plant is perennial, and flowers in autumn: the common ſpring crocuſes of our gardens are reckoned by Linnæus to be no other than varieties of it.

Saffron is cultivated in different parts of the world: that produced in our own country is greatly ſuperiour to the ſorts brought from abroad, and may be diſtinguiſhed from them by its blades being broader. It ſhould be choſen freſh, not above a year old, in cloſe cakes, neither dry nor yet very moiſt, tough and firm in tearing, of a high fiery colour, ſtaining the hands on rubbing it, and of the ſame colour within as on the outſide.

SAFFRON is a very elegant and uſeful aromatic; of a ſtrong, penetrating, diffuſive ſmell, and a warm, pungent, bitteriſh taſte. It is ſuppoſed to have a conſiderable degree of anodyne power, depending on its ſubtile odorous principle; to be more cordial and more exhilarating than almoſt any of the other aromatics, ſo as, when taken too freely, to occaſion even immoderate mirth (a); to be particularly ſerviceable in diſorders of the breaſt, in female obſtructions, and hyſteric depreſſions. It tinges the urine of a high colour. The doſe is commonly from two or three grains to ten or twelve: Geoffroy ſays it may be extended with ſafety to a ſcruple and more.

(a) Hertodt, *Crocologia, p.* 32. Boerhaave, *Elementa chemiæ, proceſſ.* 65.

Saffron gives out the whole of its virtue and colour to rectified ſpirit, proof ſpirit, wine, vinegar, and water: about three parts in four of the ſaffron are taken up by each of theſe menſtrua; and the matter which remains undiſſolved is inodorous, inſipid, and of a pale clay colour. The officinal tinctures are made with ſack † or French brandy ‡, in the proportion of an ounce to a pint. By diſſolving in the vinous tincture a proper quantity of fine ſugar, twenty-five ounces to a pint ||, an elegant cordial ſyrup is obtained. Tinctures drawn with vinegar, or other liquors ſenſibly acid, ſoon loſe of their rich colour in keeping: the colour of the vinous tinctures alſo fades a little, and a part of the diſſolved ſaffron is apt to be in time thrown off: thoſe made in proof ſpirit, and in rectified ſpirit, particularly the latter, may be kept in perfection for years.

† Vinum croceum *Ph. Lond.*

‡ Tinctura croci *Ph. Edinb.*

|| Syrupus croci *Ph. Lond.*

In diſtillation, it impregnates water ſtrongly with its flavour: if the quantity of ſaffron is large, a ſmall portion of a fragrant and very pungent eſſential oil may be collected, amounting, as is ſaid by Vogel, to about a dram and a half from ſixteen ounces. The remaining decoction, inſpiſſated, yields an extract of a high colour, in taſte unpleaſantly bitteriſh, without any thing of the diſtinguiſhing ſmell or flavour of the ſaffron.

Rectified ſpirit elevates alſo a conſiderable ſhare of its flavour, but leaves much the greateſt part concentrated in the extract. This extract, inſpiſſated only to the conſiſtence of oil, is recommended by Boerhaave as one of the higheſt cordials and exhilarants: the doſe is a few drops, which may be taken in a glaſs of rich wine. It diſſolves in wine and in water, as well as in ſpirit, and mingles alſo with oils both expreſſed and diſtilled; appearing to be a ſubſtance of a peculiar nature. The ſpirit, diſtilled from ſaffron, is ſaid to have an advantage above moſt other cordial ſpirits, of diſpoſing the patient to ſweat.

CRYSTALLUS.

CRYSTALLUS Pharm. Edinb. (a) ROCK CRYSTAL: a tranſparent colourleſs ſtone; of a regularly angular figure, which is generally that of an hexagonal column terminated by a pyramid of the ſame number of ſides; hard, ſo as to ſtrike fire freely with ſteel; becoming white, opake, and friable, by repeated ignition and extinction in water; not diſſoluble by any acid, either in its natural ſtate or when calcined; fuſible, with vitrefactive fluxes, into a nearly colourleſs glaſs.

Rock cryſtal, and ſome other ſtones of the ſame general nature, introduced into medicine by the credulity of former times, not yet expunged from catalogues of the materia medica, and in ſome places ſtill made ingredients in officinal compoſitions; appear, from their indiſſolubility in every known ſpecies of humid menſtruum, to be incapable of exerting any action in the human body: unleſs that by the rigidity and hardneſs, which their particles retain, however finely levigated, they may offend the ſtomach and inteſtines; or that by virtue of the calcareous earth, which they abrade plentifully from the marble inſtruments with which they are levigated, the prepared powder may act as an abſorbent.

THE colours of the *precious ſtones* appear to depend on a principle diſtinct from the ſtony matter which makes their baſis. It is ſaid, that the ſapphire, emerald, amethyſt, and cornelian, on being urged with a ſtrong fire, become colourleſs, and nearly ſimilar to common cryſtal: that the emerald, in parting with its tinging matter in the fire, emits viſible flames *(b)*: that the hyacinth and garnet melt, in a vehement fire, into a vitreous maſs, of a browniſh or blackiſh colour like that which ferrugineous calces communicate *(c)*. From theſe kinds of experiments it has by ſome been inferred, that the coloured precious ſtones, though their ſtony baſis is confeſſedly inactive, may, nevertheleſs, have ſome medicinal powers depending on the tinging metallic impregnation *(c)*. But ſurely this reaſoning does not take off the impropriety, or rather abſurdity, of uſing, as medicines, theſe coſtly concretes, from a poſſibility of their producing effects, which far cheaper ſubſtances are known to produce with certainty.

(a) Expunged. *(b)* Geoffroy, *Tract. de mat. med. tom.* i. *p.* 95.

(c) Pott, *Chymiſche unterſuchungen von der lithogeognoſia, p.* 45.

CUBEBÆ.

CUBEBÆ Pharm. Lond. & Edinb. *Cubebæ vulgares C. B.* Cubebs: dried berries, of an aſh brown colour, generally wrinkled, greatly reſembling pepper, but furniſhed each with a ſlender ſtalk, whence they are called by ſome *piper caudatum.* They are the fruit of an Eaſt Indian tree, of which we have no particular account, ſaid to reſemble the apple tree, and to produce its berries in cluſters.

Cubebs are a warm ſpice; of a pleaſant ſmell, and a moderately pungent taſte. Their heat and pungency are weaker than thoſe of pepper, but of the ſame kind; and reſide, like thoſe of that ſpice, not in the volatile, but in the more fixt matter. In diſtillation with water, they yield a ſmall quantity of a ponderous eſſential oil, of an agreeable and moderately ſtrong ſmell, but in taſte mild: the remaining decoction, inſpiſſated to the conſiſtence of an extract, retains a conſiderable ſhare of the warmth and pungency of the cubebs. An extract made with rectified ſpirit poſſeſſes the whole of their flavour in perfection, for even the odorous principle does not exhale or diſtil with this menſtruum: the taſte of this extract is very hot and pungent, though not near ſo much ſo as that of the ſpirituous extract of pepper.

CUCUMIS.

CUCUMBER: an annual herb, with naked monopetalous flowers divided into five ſegments, and a large juicy fruit produced under the flower. Thus far the characters of the cucumber agree with thoſe of ſome other plants, whoſe ſeeds have been commonly ranked among the officinals, and which may properly be placed together.

1. Cucumis hortensis *Ph. Edinb.* (a) *Cucumis ſativus vulgaris C. B. Cucumis ſativus Linn.* Cucumber: with oblong fruit, often covered with little protuberances; and oblong white ſeeds.

2. Citrullus *Pharm. Edinb.* (a) *Anguria citrullus dicta C. B. Cucurbita Citrullus Linn.* Citrul: with very large, roundiſh, ſmooth hard rinded fruit; and oblong, broad, rhomboidal, blackiſh ſeeds.

(a) Expunged.

3. CUCURBITA *Pharm. Edinb. (a) Cucurbita lagenaria flore albo, folio molli C. B. Cucurbita lagenaria Linn.* Gourd, bottle-gourd: with very large, thick woody rinded fruit, bellied like a bottle; and long whitiſh ſeeds, having two angles like horns at the top.

4. PEPO *Pharm. Edinb. (a) Pepo vulgaris Raii hiſt. Cucurbita Pepo Linn.* Common pumpion: with very large, roundiſh or oval fruit; and rhomboidal whitiſh ſeeds, having a rim or elevated line round the edges.

THE cucumber and citrul are eſteemed cooling and relaxing; ſalubrious in hot bilious diſpoſitions, and where there is a tendency to inflammation; prejudicial in the oppoſite circumſtances; difficult of digeſtion, and of very little nouriſhment.

The ſeeds of all theſe plants are ſimilar in quality; and have been generally uſed promiſcuouſly, and diſtinguiſhed by the title of the greater *cold ſeeds.* They have a ſweetiſh taſte, accompanied with ſome unctuoſity, and no ſmell or particular flavour: on expreſſion, they yield a ſoft inſipid oil, of the ſame general nature with that of almonds: on trituration with water, their oil, by the mediation of the mucilaginous and farinaceous matter of the ſeed, unites with the water into an emulſion or milky liquor. Theſe emulſions have been uſed as diluents, refrigerants, and emollients, in the ſame caſes as thoſe prepared from ſweet almonds; which laſt are now almoſt univerſally preferred. The ſeeds in ſubſtance have likewiſe been made ingredients in ſome officinal emollient powders; for which purpoſes they are not well adapted, as being liable to grow ſoon mouldy and rancid in keeping, eſpecially in a powdery form: thoſe of the cucumber ſeem to be the leaſt ſubject to this inconvenience.

5. CUCUMIS AGRESTIS *Ph. Lond. Cucumis ſilveſtris aſininus dictus C. B. Momordica Elaterium Linn.* Wild cucumber: with warty, hairy, ſomewhat oval fruit, not above two inches in length: the fruit, when ripe, burſts on being touched, and throws out with violence its whitiſh juice and its black ſeeds. It is ſown annually, as all the preceding, in gardens.

(a) Expunged.

All the parts of the wild cucumber are ſtrongly purgative: the fruit appears to be ſomewhat more ſo than the root, and this than the leaves. The juice that iſſues ſpontaneouſly, or by very light preſſure, on ſlitting the fruit when almoſt ripe, has an unpleaſant ſmell, and a very durable nauſeous bitter taſte: on ſtanding for a few hours, it parts into a thick matter which ſettles to the bottom, and a thin watery fluid, which floats above: this laſt may be commodiouſly drained off, after the clearer part is decanted, by means of ſtrips of woollen cloth or ſkains of cotton laid over the ſides of the veſſel. The thick fecula, dried in the ſun or any other gentle heat, is a very ſtrong, irritating, but ſlow, cathartic; and often operates likewiſe upwards. It remarkably raiſes the pulſe, and ſeems to kindle a degree of fever for a time: Liſter and Hoffman obſerve, that its effect in increaſing the pulſe is perceivable even in the extremities of the fingers. Its uſe therefore is in cold indolent phlegmatic caſes; particularly in dropſies, in which it has ſome times been given with ſucceſs after medicines of a milder kind had proved ineffectual. Two or three grains are in general a ſufficient doſe: in ſome caſes this quantity has acted violently: in others, five grains have procured plentiful evacuation, without much uneaſineſs or diſturbance to the conſtitution. It is ſaid, that in Holland, an extract made with wine from the roots of the plant is ſubſtituted to the elaterium, and has been found to be equally efficacious and ſafe: though Boulduc (a) ſpeaks of an extract of this root, made probably with water, which appears to have been much weaker; the doſe being from twenty-four to thirty grains. In what kind of matter the purgative virtue of this plant reſides, has not been ſufficiently examined: according to Boulduc, ſpirit of wine has ſcarcely any action upon it: and that water is not its proper menſtruum appears from its quitting the watery juice and ſettling to the bottom.

Elaterium *Ph. Lond. & Edinb.*

CUPRUM.

CUPRUM Pharm. Lond. *Cuprum ſive Venus Pharm. Edinb.* Copper: a reddiſh metal, nearly nine times ſpecifically heavier than water; requiring for its fuſion a ſtrong white heat, and calcining by a continuance of a weaker red heat into a dark reddiſh powder; contracting, from long expoſure to the air, a greeniſh ruſt; ſoluble in all acids and in volatile alkaline ſpirits, and exhibiting, when diſſolved, a blue or green colour, or a colour compoſed of the two. Volatile ſpirits, in particular, receive from a ſmall proportion of it a beautiful deep blue; and if added to ſolutions of it made in acids, when ſo far diluted as to appear almoſt or altogether colourleſs, change them immediately to the ſame fine colour. If a piece of bright iron be immerſed in the acid ſolutions, the acid quits the copper to attack the iron; and the copper, in its ſeparation from the menſtruum, adheres to the iron, which ſoon appears covered with a cupreous coat. On theſe principles, very minute quantities of copper, diſſolved in liquors, may be readily diſcovered.

(a) *Hiſtoire de l'acad. roy. des ſcienc. de Paris, pour l'ann.* 1719.

There are conſiderable mines of copper in England, Sweden, Germany, and many other parts of the world. The ores are often, wholly or in part, of beautiful blue or green colours like thoſe of the ſolutions: all the mineral ſtones, tinctured with theſe colours, are ſuppoſed to receive them from this metal. Moſt of the ores abound with ſulphur: which this metal very ſtrongly retains, and which is difficultly ſeparated by repeated calcinations and fuſions.

Pure copper, in its metallic ſtate, or calcined by fire, appears to be indiſſoluble, and of no conſiderable effect, in the bodies of animals. There are inſtances of pieces of copper having been ſwallowed, and lying long in the bowels, without ſeeming to act any otherwiſe than by their bulk or figure.

Diſſolved in the nitrous or marine acids, and cryſtallized or exſiccated by heat, it proves a ſtrong cauſtic. Theſe preparations, particularly that with the nitrous acid, were formerly ſometimes made uſe of in this intention; but have long been laid aſide, on account of their great diſpoſition to liquefy.

Combined with the vitriolic acid, or with the acids of the vegetable kingdom, or corroded by the air, it acts, when externally applied, as an efficacious detergent and a gentle eſcharotic; when taken internally, as a virulent emetic and cathartic. Some have ventured on ſmall doſes of theſe preparations, as quick emetics, for procuring immediate evacuation where poiſonous ſubſtances have been ſwallowed: but that end may ſurely be obtained by leſs dangerous means. A more particular account of theſe preparations is given under their reſpective names, *Ærugo* and *Vitriolum*.

A ſaturated ſolution of the metal in volatile ſpirits is recommended by Boerhaave in diſorders proceeding from an acrid, weak, cold, phlegmatic cauſe. He ſays, that if three drops be taken in the morning with a glaſs of mead, and the doſe doubled every day to twenty-four drops, it proves attenuating, warming, and diuretic: that by this medicine he once cured a confirmed aſcites, though in other caſes of the ſame kind it failed: that it is the only preparation of copper which does not prove emetic; and that, as it does no harm, it may be tried with ſafety*(a)*. It is probable, that this preparation differs from the preceding only in containing leſs copper, the quantity which volatile ſpirits diſſolve being extremely ſmall; and that in conſiderable doſes, it would exert the ſame virulent operation with the other ſolutions or ſoluble preparations of this metal. * A ſolid preparation of this kind made by rubbing together in a glaſs mortar two parts of blue vitriol and three of the volatile ſalt procured from ſal ammoniac, till all efferveſcence has ceaſed, and then gently drying the concrete, is ordered in the laſt Edinburgh pharmacopœia, under the name of *cuprum ammoniacum*. It has frequently been given with ſucceſs in epileptic and convulſive diſorders.

A tincture, differing little in its cupreous impregnation from that made with volatile ſpirits, is uſed in the ſhops as an external detergent, and for conſuming ſpecks or films of the eyes. This is prepared with a ſolution of ſal ammoniac in lime-water, in the proportion of a dram † or four ſcruples ‡ of the ſalt to a pint of the liquor; which ſolution is tinged of a ſapphire blue colour by ſtanding for ſome days with ſome ſlips of copper or in a copper veſſel †, or by the addition of eight grains of verdegris ‡.

Aq. ſapphir.
† *Ph. Lond.*
‡ *Ph. Edinb.*

Copper veſſels, in certain circumſtances, give a taint to almoſt all kinds of liquors, even to pure water; more eſpecially if they have not been thoroughly cleanſed from the ruſt which they contract by lying expoſed to a moiſt air: in certain circumſtances, however, they appear to reſiſt even liquors of conſiderable acidity. Moſt of the vegetable acids, ſo long as they are kept boiling in copper veſſels, have little or no action on the metal; though in a gentle heat, or in the cold, they become in a ſhort time impregnated with its ill taſte and with its pernicious qualities, corroding it chiefly at the ſurface of the liquor: if the metal is only moiſtened and expoſed to the air, it is corroded more ſpeedily; and ſooner ſtill if expoſed to the vapours of the acid. The moſt acid ſyrups are prepared by the confectioners, by boiling in copper veſſels kept perfectly clean, without receiving any hurtful impregnation; whereas the far leſs acid liquor, that riſes towards the end of long protracted diſtillations of ſimple waters, corrodes, in its paſſage through the copper head, in the form of vapour, ſo much of the metal as to prove emetic.

(a) *Elementa chemiæ, proceſſ.* 192. & *Prax. med. tom.* v. *p.* 174.

Braſs is a combination of copper with the metallic part of calamine, that is, with zinc, a metallic body ſtill eaſier of diſſolution than the copper itſelf. The two metals, nevertheleſs, form by their coalition a new compound, which does not ruſt in the air, or diſſolve in vegetable acids, or calcine in the fire, near ſo ſoon as either of them ſeparately.

CURCUMA.

CURCUMA Pharm. Lond. & Edinb. Curcuma radice longa Herm. hort. lugd. bat. Maniella kua Hort. malabar. Crocus indicus; Terra merita; Cypira. Curcuma longa Linn. TURMERIC: a ſmall tuberous knotty root, brought from the Eaſt Indies; externally greyiſh, internally of a deep lively yellow or ſaffron colour, which by age changes towards a red. Two ſorts are mentioned by authors, one longiſh, the other roundiſh: only the firſt is met with in the ſhops.

TURMERIC has a ſlight, aromatic, and not very agreeable ſmell; and a bitteriſh ſomewhat warm taſte. It readily gives out its active matter both to aqueous and ſpirituous menſtrua: to the former it communicates its own deep yellow, to the latter a fine yellowiſh red tincture. In diſtillation with water, it yields a ſmall quantity of a gold coloured eſſential oil, of a moderately ſtrong ſmell, and a pungent taſte: the remaining decoction, inſpiſſated, leaves a bitteriſh, conſiderably ſaline, maſs. Rectified ſpirit elevates little or nothing of its virtue; all the active parts of the root being left behind in the inſpiſſated extract, which is moderately warm, and bitter, and not a little nauſeous.

This root is ſaid to be in general uſe in the eaſtern countries, both for the colouring and ſeaſoning of food, and as a medicine: it is accounted one of the moſt effectual remedies in obſtructions of the viſcera and meſentery, which are there frequent; in uterine diſorders, difficulties of urine, and affections of the kidnies (a). Among us it has been employed alſo as a deobſtruent, and eſteemed by ſome a ſpecific in the jaundice: the doſe in ſubſtance is from a ſcruple to a dram; in decoction or infuſion, twice as much. It tinges the urine of a deep yellow colour.

CYANUS.

CYANUS Pharm. Pariſ. Cyanus ſegetum C. B. Centaurea Cyanus Linn. BLUE BOTTLE: a greyiſh green plant, with long narrow leaves, of which the lower are deeply jagged, the upper entire, thoſe between furniſhed with one or two long perpendicular ears on each ſide towards the bottom; the ſtalk divides, near the top, into ſeveral branches, each of which is terminated by a large blue flower, conſiſting of tubulous indented floſculi ſet in a ſmooth ſcaly head; the outer floſculi are larger than the inner, and widened in the upper part like a funnel; the ſcales are ſerrated about the edges. It is annual, common in corn fields, and found in flower greateſt part of the ſummer.

THE flowers of cyanus, haſtily dried, preſerve their colour better than moſt of the other blue flowers: they agree with the others in giving no blue tinge to ſpirit, and differ from moſt of them in giving none to water. In ſubſtance, they diſcover very little ſmell, and ſcarcely any taſte: an extract made from them by rectified ſpirit has a weak ſaline auſterity mixed with a kind of ſweetiſhneſs: an extract made by water is leſs auſtere and more manifeſtly ſaline. From hence it may be preſumed, that among the various and oppoſite virtues aſcribed to theſe flowers, the antiphlogiſtic, aperient, and diuretic ones have the beſt foundation; though even theſe they appear to poſſeſs only in a low degree.

The varieties of this plant, produced by culture in gardens, are not materially different in quality from the wild ſort. Another ſpecies, of oriental origin, *cyanus orientalis major moſchatus flore purpureo & albo Moriſ. hiſt. ox. Centaurea moſchata Linn.* commonly called ſultan flower or ſweet ſultan, promiſes, by its muſky fragrance, to have ſome claim to the cordial and antiſpaſmodic virtues, which have been groundleſsly aſcribed to our indigenous cyanus.

(a) Bontius, *Animadverſ. in Garciam ab Orta, lib.* i. *cap.* 39.

CYDONIA.

CYDONIA MALUS Pharm. Lond. & Edinb. Cotonea malus J. B. Mala cotonea majora & minora C. B. Pyrus Cydonea Linn. QUINCE: a low tree, with uncut leaves, bearing a fruit like a pear; a native of the rocky banks of the Danube, and common in our gardens.

THIS fruit has a pleaſant ſtrong ſmell, and a very auſtere acid taſte. Its expreſſed juice, taken in little quantities, as a ſpoonful or two, proves a mild, cooling, reſtringent ſtomachic; of good ſervice in nauſeæ, vomitings, nidorous eructations, and ſome kinds of alvine fluxes. A grateful and lightly cordial reſtringent ſyrup is prepared, by digeſting three pints of the depurated juice with a dram of cinnamon, half a dram of ginger, and half a dram of cloves, on warm aſhes, for ſix hours, then adding a pint of red port, and diſſolving in the ſtrained liquor nine pounds of ſugar. An uſeful reſtringent gelly or marmalade is made, by boiling the juice with fine ſugar to a due conſiſtence, in the proportion commonly of three pints to a pound. If the quinces, after they are gathered, be kept for ſome time in a dry airy place, their juice will become richer by the diſſipation of a part of their aqueous humidity.

Syrup. cydoniorum *Ph. Lond.*

The ſeeds of quinces abound with a mucilaginous ſubſtance, which they readily give out to boiling water. A dram, boiled in ſix ounces of water by meaſure, renders the liquor ſlimy, almoſt like the white of an egg: two drams make it quite thick. On inſpiſſating the decoctions, the quantity of dry extract amounts to about half the weight of the ſeeds. This mucilage has a ſlight agreeable ſmell, and a ſweetiſh taſte, more grateful than that of the other common mucilages. In keeping, in its ſoft ſtate, it ſoon grows mouldy.

Mucilago ſem. cydoni, *Ph. Lond.*

CYMINUM.

CYMINUM Pharm. Lond. Cuminum Pharm. Edinb. Cuminum ſemine longiore C. B. Cuminum Cyminum Linn. Cummin: an umbelliferous plant, reſembling fennel, but much ſmaller; producing longiſh, ſlender, plano-convex ſeeds, of a browniſh colour with yellowiſh ſtriæ. It is annual; a native of Egypt and Ethiopia; and cultivated in the iſlands of Sicily and Malta, from whence we are ſupplied with the ſeeds.

Cummin ſeeds have a bitteriſh warm taſte, accompanied with an aromatic flavour, but not agreeable. They give out great part of their ſmell by infuſion in water, but very little of their taſte: in diſtillation with water, a pungent oil ariſes, of a ſtrong ungrateful flavour like that of the ſeeds: the decoction, inſpiſſated, leaves a weakly roughiſh bitteriſh extract. Rectified ſpirit takes up the whole virtues of the cummin by infuſion, and leaves them nearly uninjured in evaporation: the inſpiſſated maſs is very warm, moderately pungent, and not a little nauſeous.

Theſe ſeeds are accounted good carminatives and ſtomachics; but have now, in great meaſure, given place, for theſe purpoſes, to medicines of a more grateful kind. Their principal uſe is in external applications, as a warm diſcutient and antiſeptic: the college of London have given a compound plaſter and cataplaſm of cummin.

CYNOGLOSSUM.

CYNOGLOSSUM Pharm. Pariſ. Cynogloſſum majus vulgare C. B. Lingua canina. Cynogloſſum officinale Linn. Hounds tongue: a biennial plant; producing, the firſt year, large, ſoft, tongue-ſhaped, long-pointed leaves; the ſecond year, a thick, branched ſtalk, with narrower and ſhorter-pointed leaves joined to it without pedicles; bearing, on the tops of the branches, dark purpliſh flowers, each of which is divided into five ſegments, and followed by four flat rough ſeeds: the root is oblong, thick, of a dark brown or blackiſh colour on the outſide, and white within. It is found wild in ſhady lanes and uncultivated grounds, and flowers in June.

The roots of hounds tongue are very juicy, and liable to grow mouldy in drying. Such as are produced in moiſt grounds have, when freſh, a rank, though not very ſtrong ſmell, like that of the narcotic plants, which in drying is in good meaſure diſſipated: thoſe, which are the produce of dry grounds, have ſcarcely any ſmell *(a)*. On the organs of taſte, they make no great impreſſion.

The medical effects of theſe roots are ſomewhat doubtful. It has been generally ſuppoſed that they are narcotic; by ſome, that they are virulently ſo. The argument for their innocence *(b)*, from the frequent and ſafe uſe of a pill, to which they ſtill give name in foreign pharmacopœias, appears unfair; the quantity of the hounds tongue root, in a doſe of that opiate pill, being only about a grain; whereas the root by itſelf is ordered, in decoction, to the quantity of an ounce, in catarrhs, coughs, diarrhœas, dyſenteries, and hemorrhagies.

The leaves of the plant are ſuppoſed to be of the ſame quality with the roots: to the ſmell, they are ſtronger and more diſagreeable. Fuller reports, that he has uſed a ſyrup of the juice a multitude of times, and could never find it to cauſe ſleep, or to be in the leaſt virulent; and that he had often experienced it to be a great remedy, ſecond to none, againſt hot, ſharp, thin, catarrhous humours, and a cough occaſioned thereby. Neither the leaves nor the roots are ever made uſe of in practice; and the colleges, both of London and Edinburgh, have now rejected the plant from their catalogue of officinals; all the good effects, which the accounts of thoſe who have recommended it afford grounds to expect from it, being obtainable, without ſuſpicion of malignity, from the products of the poppy.

CYPERUS.

CYPERUS: a plant with graſs-like leaves, and three-ſquare ſtalks, branched at top, bearing tufts of ſmall imperfect flowers, each of which is followed by a naked triangular ſeed. It is perennial.

1. Cyperus longus *Pharm. Pariſ. & Linn.* *Cyperus odoratus radice longa ſive cyperus officinarum C. B.* Cyperus or Engliſh galangal:

(a) Hermann, *Cynoſura mat. med. edit. Boecler. tom.* i. *p.* 178.

(b) Geoffroy, *Mat. med.* iii. 395. Ray, *Hiſt. plant.* i. 490.

with a long ſlender root, crooked and full of knots, of a dark brown or blackiſh colour on the outſide, and whitiſh within. It grows wild in marſhy places in ſome parts of England: the ſhops have been uſually ſupplied from Italy and France, with dried roots, not ſuperiour to thoſe which are produced in our own country.

Cyperus root has a pleaſant aromatic ſmell, and a warm bitteriſh taſte; both which it imparts almoſt totally to watery and to ſpirituous menſtrua: it tinges the former of a dark reddiſh brown colour, the latter of a bright reddiſh yellow. In diſtillation, it impregnates water with its grateful ſmell; but yields, at leaſt when only moderate quantities are ſubmitted to the operation, no ſeparable oil: rectified ſpirit carries off likewiſe, in evaporation or diſtillation, a great part of its odorous matter. The watery extract is moderately bitter, ſlightly pungent, and ſubaſtringent: the ſpirituous is in taſte bitterer and warmer; but has not much ſmell, any more than the watery extract. The quantity of both extracts is very nearly alike, amounting to about one fourth of the weight of the root.

2. Cyperus rotundus *Pharm. Pariſ. & Linn. Cyperus rotundus orientalis major C. B.* Round cyperus: with ſeveral roundiſh roots, about the ſize and ſhape of an olive, connected by fibres, rough and ruſty-coloured on the outſide, whitiſh or yellowiſh within. It is a native of the Eaſt Indies, from whence the roots are ſometimes, but rarely, brought to us. It is ſaid to grow wild alſo in France.

This root has the ſame kind of ſmell and taſte, and nearly in the ſame degree, as the foregoing. It differs, according to Cartheuſer's examination of it, in giving a gold yellow tincture to water, in yielding a little more extract, one third its weight, both with water and ſpirit; and in the ſpirituous extract being more tenacious or reſinous.

DAUCUS.

CARROT: an umbelliferous plant, with finely divided leaves; producing pale coloured, hairy, ſtriated, ſomewhat oval, plano-convex ſeeds: the entire umbel, and each of its ſubdiviſions, have a circle of little leaves at their origin: the petala are unequal and heart-ſhaped.

1. DAUCUS CRETICUS *Pharm. Lond. & Edinb. Daucus foliis fœniculi tenuiſſimis C. B. Athamanta cretenſis Linn.* Candy carrot: with white flowers, flat umbels; and oblong ſeeds, ſwelled or bellied in the middle, and pointed at one end. It is perennial, a native of the Levant and the mountains of Switzerland, and cultivated in ſome of our gardens. The ſeeds have been generally brought to us from the iſle of Candy.

THE ſeeds of the candy carrot have a light aromatic ſmell, and a moderately warm biting taſte. They have been occaſionally employed as carminatives, and ſuppoſed likewiſe to be diuretic and emmenagogue: at preſent they are little otherwiſe made uſe of than as ingredients in mithridate and theriaca.

Water, digeſted on the ſeeds, becomes impregnated with their ſmell, but takes up very little of their taſte: in diſtillation or evaporation, it elevates the whole of their ſmell and aromatic warmth, leaving a weakly bitteriſh mucilaginous extract: on diſtilling large quantities, a ſmall portion of a yellowiſh eſſential oil is obtained, of a moderately pungent taſte, and ſmelling ſtrongly of the daucus. Rectified ſpirit takes up the whole of their virtue by digeſtion, and elevates little in diſtillation: the remaining extract ſmells weakly, and taſtes ſtrongly of the ſeeds. The colour both of the tincture and extract made with ſpirit, is a bright yellow; of thoſe with water, browniſh: the quantity of ſpirituous extract is about one half of the watery.

2. DAUCUS SILVESTRIS *Pharm. Edinb. Staphylinus. Paſtinaca ſilveſtris tenuifolia dioſcoridis vel daucus officinarum C. B. Daucus Carota Linn.* Wild carrot, or birds-neſt, ſo called from the appearance of the umbels, which cloſe and form a roundiſh cavity in the middle after the flowers have fallen: one or more of the inner flowers are commonly of a deep red colour, and ſeveral of the others red in part: the ſeeds are ſmaller, ſhorter and rounder than thoſe of the preceding. It is biennial, common in uncultivated grounds, and flowers in June.

THE ſeeds of the wild carrot are ſimilar in ſmell and taſte to thoſe of the *daucus creticus*, but weaker. The eſſential oils obtained from the two are nearly alike in quality, but ſomewhat different in quantity, the wild yielding a little leſs than the other. The ſpirituous extract of the wild is ſomewhat leſs pungent than that of the candy ſort. Malt liquors, fermented with theſe ſeeds, receive from them an agreeable flavour ſomewhat reſembling that of lemon peel, and are ſuppoſed to become uſeful diuretic drinks in cachectic and ſcorbutic diſorders. * Infuſions of them in water, in the proportion of three ſpoonfuls of the ſeed to a pint of boiling water, are ſaid to have done great ſervice in calculous caſes, and to give ſpeedy relief in ſtrangury (a). In the ſhops they have frequently ſupplied the place of the *daucus creticus*, and been themſelves ſupplied by the ſeeds of the garden carrot, which are much weaker in aromatic warmth than either. The garden and wild carrot are reckoned by botaniſts the ſame ſpecies of plant, their differences proceeding only from culture.

* A poultice of the root of garden carrot has been ſucceſsfully uſed to cancerous and phagædenic ulcers, the fætor of which it has not failed very ſpeedily to remove, and generally with a great amendment of the ſtate of the ſore. Some have been brought to cicatriſe by its uſe ſolely. The method of making the cataplaſm is, to grate the carrots, and mix them with as much water as is neceſſary. The application is to be renewed two or three times a day. It is found to be moſt efficacious when the carrots are freſh and juicy. This remedy was recommended by Mr. Soultzer in a letter in a Magazine; and ſome caſes of its efficacy were afterwards publiſhed in the 4th Vol. of the *London Medical Obſervations and Inquiries*.

A marmalade of carrots has alſo been propoſed as an addition to the ſtock of ſhip's proviſions, for preventing the ſcurvy.

DENS LEONIS.

DENS LEONIS ſive Taraxacum Pharm. Edinb. Dens leonis latiore folio, & anguſtiore folio C.B. Leontodon Taraxacum Linn. DANDELION: a low plant, with long, narrow, deeply indented or jagged leaves, lying on the ground; among which ariſes a ſingle, naked, hollow pedicle; bearing a large yellow floſculous flower, ſet in a double cup, the outermoſt of which conſiſts of ſeveral little oblong leaves turned downwards:

(a) *Gent. Mag.* 1766, 175, and 1771, 409.

the flower is followed by ſmall ſeeds, covered with a tuft of long down: the root is oblong, ſlender, yellowiſh or browniſh on the outſide, and white within. It is perennial, common in uncultivated grounds, and flowers from April to the end of ſummer.

The roots, leaves, and flower-ſtalks of dandelion abound with a bitteriſh milky juice, of no ſmell or particular flavour. They promiſe to be medicines of no inconſiderable efficacy in ſundry chronical diſorders, as mild detergents and aperients, ſimilar to the *cichoreum ſilveſtre*, but ſtronger. Boerhaave had a high opinion of this and the other lacteſcent plants; and eſteems them capable, if duly continued, of reſolving very obſtinate coagulations and obſtructions of the viſcera. Their more immediate ſenſible operation is, to looſen the belly, promote the urinary diſcharge, and render the water high coloured, without exciting any preternatural heat. * Bergius affirms that he has frequently ſucceeded in reſolving ſcirrhi of the liver, by the long continued uſe of a decoction of dandelion root and ſorrel leaves in whey or water, with the addition of yolk of egg; at the ſame time giving cream of tartar. This method alſo ſucceeded in the ſtone of the gall-bladder, and aſcites *(a)*.

The expreſſed juice of the plant has been taken to the quantity of a quarter of a pint or more, three or four times a day: it ſeems to loſe nothing of its virtue in being gently inſpiſſated to the conſiſtence of an extract; which is moderately and not unpleaſantly bitter, with ſome degree of ſweetiſhneſs. The dried roots, which are ſtronger in taſte than the leaves, give out their virtues both to water and rectified ſpirit; and tinge the former of a brown, the latter of a yellow colour. The tinctures and infuſions, gently inſpiſſated, differ little from the inſpiſſated juice; except that the watery extract is rather weaker; and that the ſpirituous, which is in ſmaller quantity, has a ſtronger bitter taſte, and diſcovers alſo a ſlight aſtringency. Cartheuſer ſays, that the watery extract amounts to one fourth, the ſpirituous only to one eighth the weight of the root.

Neither the plant in ſubſtance, nor its preparations, bear keeping well: after the dried root had lain about a twelvemonth, its bitterneſs was wholly loſt, and only a ſlight ſweetiſhneſs remained: an extract made from the freſh root, inſpiſſated to dryneſs, and kept for the ſame length of time, ſuffered nearly the ſame change.

(a) Mat. med. 648.

DICTAMNUS.

DICTAMNUS ALBUS Pharm. Edinb. & Linn. Dictamnus albus vulgo ſive fraxinella C. B. WHITE or BASTARD DITTANY: a plant with oval acuminated leaves, like thoſe of the aſh tree, but ſmaller and more juicy, ſet in pairs on a middle rib, which is terminated by an odd one: on the tops of the ſtalks ſtand elegant long ſpikes of irregular white or purpliſh flowers, followed each by five pods full of ſhining black ſeeds. It is perennial, and grows wild in the mountainous parts of France, Italy, and Germany; from whence the white cortical part of the root, freed from the fibres and pith, is ſometimes brought to us, dried, and rolled up in the form of quills.

THE herb has a ſtrong ſmell, of an unpleaſant reſinous or bituminous kind: on the tops of the ſtalks, and the flower cups, the microſcope diſcovers innumerable little veſicles, filled with an eſſential oil, the ſource of its ſtrong ſcent. It is ſaid, that on the approach of a candle, in very hot dry weather, its effluvia take fire.

The root, when freſh, has a moderately ſtrong, not diſagreeable ſmell; as met with in the ſhops, it has ſcarcely any. To the taſte it diſcovers a pretty ſtrong, and very durable, bitterneſs; which is taken up both by watery and ſpirituous menſtrua, and on inſpiſſating the filtered tinctures, remains entire in the extracts: the aqueous extract is in much larger quantity than the ſpirituous, and proportionably weaker in taſte. This root has been recommended as a ſtomachic, anthelmintic, and as an aperient in uterine obſtructions; but is at preſent very rarely made uſe of. *Dr. Stœrck has publiſhed ſome caſes in which the root of white dittany, was given with good effect in epileptic fits, melancholy, intermittent fevers, worms, and female obſtructions. It was given either in powder in the doſe of a ſcruple or half a dram, or in tincture.

DICTAMNUS CRETICUS *Pharm. Lond. & C. B. Origanum creticum latifolium tomentoſum Tourn. Origanum Dictamnus Linn.* Dittany of Crete: a ſmall, ſhrubby, branched plant; with ſquare ſtalks; roundiſh leaves about an inch in length, covered with a thick white down, ſet in pairs at the joints; and purpliſh labiated flowers, in looſe ſcaly heads or ſpikes, drooping downwards. It is perennial, a native of ſtony grounds in Greece and the iſland of Candy, and bears the ordinary winters of our own climate. The ſhops are generally ſupplied from Italy, with the leaves tied up in bundles, which are often damaged or decayed, and at beſt not ſuperiour to thoſe of our own growth: they have now and then pieces of the flowery heads among them, but oftener ſtalks, and different foreign matters.

The leaves of dittany of Crete have been chiefly recommended as emmenagogue, alexipharmac, and vulnerary. They are apparently, when in perfection, a very warm aromatic; of an agreeable ſmell, and a hot biting taſte, reſembling that of the *thymus citratus*, but ſtronger and more pungent. They impart their virtues both to water and rectified ſpirit; and tinge the former of a yellowiſh, the latter of a green colour. Diſtilled with water, they give over a moderately ſtrong impregnation to the aqueous fluid; from which, if the quantity of dittany be large, there ſeparates, as Neumann obſerves, a ſmall portion of a yellowiſh eſſential oil, of a highly pungent aromatic taſte and ſmell, and which congeals in the cold into the appearance of camphor: the remaining decoction, inſpiſſated, leaves a bitteriſh, diſagreeable maſs, totally diveſted of the warmth and flavour of the herb. Rectified ſpirit, diſtilled off from the tincture made in that menſtruum, brings over little or nothing of the virtue of the dittany: the ſpirituous extract is a tolerably grateful and very hot pungent aromatic.

DIGITALIS.

DIGITALIS Ph. Pariſ. Digitalis purpurea Pharm. Edinb. & Linn. Digitalis purpurea folio aſpero C. B. Foxglove: a ſomewhat hairy plant; with oblong, acuminated, ſerrated leaves; and a thick, angular, hollow ſtalk, on which numerous purple tubulous flowers, reſembled to the finger of a glove, hang downwards, in a row along one ſide, each on a ſhort pedicle: the flower is followed by an oblong pointed capſule, full of ſmall angular ſeeds. It is biennial; grows wild in woods and on heaths; and puts forth in June or July its elegant flowers, which often continue a month or longer. It is obſervable of this plant, that it grows only on gravelly ſoils; rarely or never on thoſe where there are ſtrata of calcareous earths or ſtones underneath.

The leaves of foxglove have a bitteriſh very nauſeous taſte; which they communicate both to watery and ſpirituous menſtrua. They have been ſtrongly recommended in epileptic diſorders: Parkinſon relates, that after two or three fits had been ſuffered every month for twenty-ſix years, a cure was obtained by taking twice a week a decoction made in ale, of two handfuls of foxglove leaves with four ounces of polypody of the oak. The operation of this medicine, or of the foxglove by itſelf, is by ſtool and vomit; and appears, from the accounts given of it by authors, to be ſo violent, as to afford ſufficient foundation for the preſent diſuſe of the plant *(a)*. Externally, the leaves and flowers have been employed, with greater ſafety, and ſometimes, as is ſaid, with ſucceſs, in cataplaſms and unguents for ill-conditioned ulcers.

*DOLICHOS.

DOLICHOS Pharm. Edinb. Dolichos pruriens Linn. Cacara pruritus Rumph. Amb. Couhage, or Cow-itch. *Cadjuct, Bengalis.*

This is an herbaceous plant, of the papilionaceous tribe, growing in the Eaſt and Weſt Indies. It bears pods, denſely covered with ſharp hairs, which have the property of penetrating the ſkin, and cauſing a moſt troubleſome itching. This quality, with us, is only employed in performing miſchievous tricks; but in the Weſt Indies, the cow-itch is given internally as a very efficacious anthelmintic. The moſt particular account of the uſe of this remedy is contained in Mr. Bancroft's *Hiſt. of Guiana*, and it is confirmed by a letter in the *Medical Comment.* Vol. II. p. 82.

(a) Boerhaave judges it to be of a poiſonous nature, and ſays it is ſo acrid as to exulcerate the mouth, fauces, œſophagus and ſtomach. *Hiſt. plant. Lugd. Bat. p.* 308. & *Haller Stirp. Helvet. p.* 617. Dr. Alſton, on the other hand, ranks it among thoſe indigenous vegetables, "which, "though now diſregarded, are medicines of great virtue, and ſcarcely inferiour to any that the "Indies afford." *Index medicamentorum ſimplicium, præfat. p.* 5. For my own part, I have had no experience of this plant uſed as a medicine; and, in regard to the taſte, little can be judged, from that quality, of the virtues of ſubſtances of this kind: the taſte of the digitalis is ſtrong and nauſeous, but not near ſo acrid or pungent as that of many vegetables which are taken with great ſafety.

The manner in which it is employed, is to mix the hairy matter ſcraped off from the pods, with ſyrup or melaſſes, into a thin electary, of which a tea-ſpoonful is given to a child two or three years old, and double the quantity to an adult. The doſe is exhibited in the morning, faſting, for three ſucceſſive days, after which a doſe of rhubarb is given. Its effects are repreſented as remarkably powerful and certain, without the leaſt dangerous conſequence. The ſpiculæ ſeem by their mechanical action either to excite the periſtaltic motion of the inteſtines, or to irritate and annoy the worms themſelves. Neither a tincture nor decoction of the cow-itch were found to poſſeſs the leaſt anthelmintic power.

A particular botanical deſcription of the plant by Mr. Kerr is given in the *Medical Comment.* Vol. II. p. 202.

DORONICUM.

LEOPARDS BANE: a hairy plant, with uncut leaves, and yellow radiated diſcous flowers, which ſtand ſolitary upon long pedicles on the tops of the ſtalks and branches, and are followed by ſmall ſeeds winged with down: the lower leaves have long pedicles, thoſe which grow on the ſtalks have none. It is perennial.

1. DORONICUM *ſive Aliſma & Arnica germanorum Pharm. Pariſ. Arnica Pharm. Edinb. Doronicum plantaginis folio alterum C. B. Arnica montana Linn.* German leopards bane: with oval-pointed, ribbed leaves, like thoſe of plantane, ſet in pairs upon the ſtalk; and oblong roots. It is a native of the mountainous parts of Germany, and flowers throughout the ſummer.

THE leaves and flowers of this plant have a penetrating bitteriſh taſte, and emit, when bruiſed, a light pungent ſmell, which provokes ſneezing. Both water and rectified ſpirit extract their virtues by infuſion, and carry off a conſiderable ſhare of them in evaporation. The roots are more of an aromatic nature than the other parts, and their active matter ſomewhat leſs volatile.

This plant has been greatly eſteemed in different parts of Germany, as a ſpecific for reſolving coagulated blood occaſioned by falls or bruiſes;

from its efficacy in which intentions, it received the title of *lapſorum panacea:* the doſe is an infuſion of one or two pugils of the leaves, or flowers, or both, and in ſome caſes of the roots. It is ſaid, that ſoon after the taking of this medicine, a great pain is felt about the affected part, and generally a cardialgic anxiety of the ſtomach, with nauſea, reaching, and gripes, and ſometimes extreme difficulty of breathing: that theſe ſymptoms are alleviated a little by walking about, and may be removed, if they ſhould be very alarming, by venæſection: that in a ſhort time, they terminate ſpontaneouſly in a copious diſcharge of urine, or in a profuſe ſweat, and ſometimes in vomiting or purging *(a)*. This herb is recommended likewiſe, in conſequence of its ſuppoſed reſolvent power, in ſundry obſtinate chronical diſorders. It appears, however, to be much too violent in its operation for general uſe, unleſs repeated ſmall doſes ſhould be accompanied with the good effects, without the diſturbance, which a full doſe is ſaid to produce. Simon Paulli ſuſpects, that it is made an ingredient in the malt liquors uſed in ſome places, by the common people, againſt bruiſes and other diſorders.

* In a diſſertation on the virtues of the flowers of arnica, written by Dr. Collin of Vienna, a variety of caſes are related of their good effects in paralytic diſorders, amauroſis, and convulſive and ſpaſmodic caſes. An infuſion or decoction of the flowers was uſed in the proportion of from one to four drams, to the pint of liquid. It generally occaſioned pain in the affected parts, but no other diſagreeable conſequences of its uſe are mentioned.

2. DORONICUM ROMANUM: *Doronicum radice ſcorpii C. B. Doronicum graphoy dictum J. B. Aconitum pardalianches minus quod falſo doronicum vocant Matth. Doronicum pardalianches Linn.* Roman leopards bane: with obtuſe heart-ſhaped leaves ſet alternately on the ſtalk, and ſlender knotty roots, ſuppoſed to reſemble the ſcorpion's tail. It is a native of the Alps, cultivated in ſome of our gardens, and flowers in June or July.

THE root of the Roman leopards bane has a ſweetiſh ſomewhat aſtringent taſte, accompanied with a weak aromatic flavour. Its medi-

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(a) Tabernæmontanus, *Herbar. lib.* ii. *ſect.* i. *cap.* xxii. *p.* 714. & *ſect.* xi. *p.* 116. Fehr, *Eph. nat. curioſ. dec.* i. *ann.* ix & x. *obſ.* 2. Gohl, *Act. med. Berolinenſ. vol.* i. *n.* 4. *p.* 46. De la Marche, *Diſſert. de arnicæ veræ uſu.*

cinal qualities were formerly the ſubject of a conſiderable diſpute; ſome affirming it to be poiſonous, and others ſalutary. Geſner relates, that though it poiſons dogs, he had himſelf many times eaten the herb as a grateful aromatic, and the roots alſo both freſh and dry, without perceiving any ill effect from them: that he had given the roots, with advantage, in vertiginous and epileptic caſes: that nevertheleſs having once taken two drams of the powdered root, a ſwelling of the belly and ſtomach ſucceeded in about eight hours, accompanied by a weakneſs of the whole body; that theſe ſymptoms continued for two days, and that he was cured by a warm bath*(a)*. The Auguſtan college, after once expunging the doronicum from their pharmacopœia, have lately received it again, and aſſure us, that experience has declared it innocent. It does not however appear, its innocence admitted, to be poſſeſſed of virtues ſufficient to recommend it to practice. Among us, it has long been diſcarded, together with all the Arabian compoſitions, as an ingredient in which (from a preſumption, not perhaps very well grounded, of its being their *duronegi)* it was originally introduced.

DRACONTIUM.

DRACUNTIUM ſive Serpentaria Pharm. Pariſ. Dracunculus polyphyllus C. B. Arum Dracunculus Linn. DRAGONS: a plant with ſmooth gloſſy leaves, ſet on long pedicles, divided into ſix or ſeven or more long narrow ſegments; and a ſingle, thick, whitiſh ſtem, elegantly variegated with reddiſh or purpliſh ſtreaks, compoſed as it were of membranes enveloping one another: on its top is a long ſheath, greeniſh on the outſide and purpliſh within, incloſing a dark-coloured piſtil, like that of arum, but larger, ſucceeded by a cluſter of red berries: the root is large, roundiſh, externally yellowiſh, internally white. It is perennial, a native of the ſouthern parts of Europe, and cultivated in our gardens: it dies to the ground early in the autumn.

(a) Some have alledged, that the taking of this root occaſioned his death; *Caſp. Hoffman de medicament. officinal. lib.* ii. *cap.* iv. §. 8. *Boerhaave, Hiſt. plant. Lugd. Bat. p.* 151. but the epiſtle in which he mentions his being cured of the ſymptoms which the doronicum had occaſioned, is dated above five months after; and Simler, his cotemporary, who gives a particular account of his death, informs us that he was carried off by an epidemic diſeaſe.

The dracontium appears to be ſimilar, in medicinal virtues, as in botanic characters, to arum; the roots and leaves being, like thoſe of that plant, extremely acrimonious, ſeeming, when ſlightly taſted, to burn or corrode the tongue, and continuing to painfully vellicate the part for many hours. The acrimonious matter is likewiſe of the ſame kind in regard to its pharmaceutical properties; being in great part diſſipated or deſtroyed by exſiccation; not being diſſoluble either by watery or ſpirituous menſtrua; not riſing with either menſtruum in diſtillation, but being deſtroyed in the proceſs; being extracted, by expreſſion, along with the watery juice; but ſoon ſeparating from the aqueous fluid, and being now found, though not a little weakened, in the fecula or ſediment. This plant might therefore be uſed in the ſame caſes as arum, but general practice employs only the latter. So far as can be judged, between ſubſtances of ſuch vehement pungency, the dracunculus is rather the ſtrongeſt of the two.

ELATINE.

ELATINE Pharm. Lond. Elatine dioſcoridis Lobel. adv. Linaria ſegetum nummulariæ folio villoſo Tourn. Antirrhinum Elatine Linn. FLUELLIN or FEMALE SPEEDWELL: a low, procumbent plant; with oval, acuminated, downy leaves, ſet alternately on the ſtalks: from their boſoms iſſue long pedicles, bearing irregular, monopetalous, labiated, gaping flowers, with a crooked tail or ſpur behind, followed by roundiſh capſules full of ſmall ſeeds: the upper lip is of a dark purpliſh colour, the lower lip and the ſpur yellow. It is annual, grows wild in corn fields, and flowers in July.

THE leaves of *elatine* have a roughiſh very bitter taſte, and ſcarcely any ſmell. Both watery and ſpirituous menſtrua extract their active matter by infuſion, and leave it entire in evaporation. This herb was formerly accounted an excellent detergent and purifier of the blood. An extract made from it by water has been given in doſes of a dram, and the expreſſed juice from three to five ounces, twice or thrice a day, and the juice applied alſo externally; againſt ſcorbutic diſorders, and different kinds of old ulcers. A decoction of it has been uſed likewiſe in gliſters for alvine fluxes. A combination of its active matter with honey, prepared

pared by boiling four pints of the depurated juice with four pounds of clarified honey, is ſometimes kept in the ſhops; but neither this preparation, nor the herb in any form, are at preſent much made uſe of.

Mel elatines *Ph. Lond.*

ELEMI.

GUMMI ELEMI Pharm. Lond. ELEMI: a concrete reſinous juice, ſaid to be obtained from a large tree reſembling an olive; *(Amyris elemifera Linn.)* brought from the Spaniſh Weſt Indies, and ſometimes from the Eaſt Indies, in oblong roundiſh cakes, generally wrapt up in flag leaves. The beſt ſort is ſoftiſh, ſomewhat tranſparent, of a pale whitiſh yellow colour, inclining a little to greeniſh. The faculty of Paris mentions a ſpurious elemi, or *gummi chibou,* which is not yet known among us.

ELEMI has a ſtrong, tolerably pleaſant ſmell; and a ſlight bitteriſh taſte. It gives out very little to aqueous menſtrua, but almoſt totally diſſolves in rectified ſpirit, tinging the fluid of a pale gold colour. Diſtilled with water, it yields a thin pale coloured eſſential oil, amounting to about one ounce from ſixteen, of a moderately pungent taſte, and ſmelling ſtrongly of the elemi: a friable inodorous reſin remains behind in the ſtill. On ſubmitting to diſtillation the ſolution made in rectified ſpirit, a little of the fragrance of the elemi ariſes with the ſpirit, greateſt part remaining in the inſpiſſated maſs, which has a conſiderable ſhare of the ſmell, though it makes little impreſſion on the organs of taſte.

This reſin is ſcarcely otherwiſe employed among us, than as an ingredient in digeſtive ointments; one of the beſt of the officinal digeſtives, commonly called the ointment or liniment of Arcæus, conſiſts of ſix parts of the elemi, five or ſix of turpentine, and twelve of lard or of a mixture of lard and ſuet, melted together. This reſin ſhould nevertheleſs ſeem applicable to other purpoſes, and to be preferable, for internal uſe, to ſome reſinous ſubſtances that have been held in greater eſteem.

ELEUTHERIA.

ELEUTHERIÆ CORTEX Pharm. Lond. Caſcarilla Pharm. Edinb. Thus judæorum Park. Cortex thuris nonnullis dictus, vel thymiama,

miama, vel thus judæorum Raii hiſt. ELEUTHERIA OR CASCARILLA: the bark, probably of the ſhrub deſcribed and figured by Cateſby under the name of *ricinoides elæagni folio* or *ilathera, Croton Caſcarilla Linn.* which grows plentifully in moſt of the Bahama iſlands *(a)*. From thoſe iſlands, particularly, as it is ſaid, from one of them called Elatheria, it is immediately brought to us; in curled pieces, or rolled up into ſhort quills, about an inch in width: covered on the outſide with a rough whitiſh matter, and browniſh on the inner ſide; exhibiting, when broken, a ſmooth, cloſe, blackiſh brown ſurface.

THIS bark, freed from the outer whitiſh coat which is inſipid and inodorous, has a light agreeable ſmell, and a moderately bitter taſte, accompanied with a conſiderable aromatic warmth. It is eaſily inflammable, and yields, whilſt burning, a very fragrant ſmell, ſomewhat reſembling that of muſk; a property which diſtinguiſhes the eleutheria from all other known barks *(b)*.

Stiſſer appears to have been the firſt who employed the cortex eleutheriæ as a medicine in Europe. He relates, that he received this aromatic bark from England; and that ſome time after, it was ſold at Brunſwick for Peruvian bark: that a tincture of it in alkalized vinous ſpirits, or in dulcified alkaline ſpirits, proved carminative and diuretic, and did conſiderable ſervice in arthritic and ſcorbutic caſes; and that if taken immediately after meals, it affected the head a little *(c)*.

Eleutheria was ſoon after employed by Apinus, in an epidemic fever of the intermittent kind, which raged in ſome parts of Norway in 1694 and 1695. This diſeaſe, which at firſt had the appearance of an ordinary intermittent, was at length accompanied with petechial ſpots. The

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(a) Eſſay towards a natural hiſtory of Carolina, Florida, and the Bahama iſlands.

(b) This property ſeems to confirm the above account; that eleutheria (not of the growth of the Eaſt Indies as ſome have ſuppoſed, nor of the Spaniſh Weſt Indies as others) is really the produce of the Bahama *ricinoides* of Cateſby; whoſe bark, he ſays, infuſed either in wine or water, gives a fine aromatic bitter, and being burnt yields a fine perfume. Thoſe, who imagine the eleutheria to be the bark of a Peruvian tree, ſeem to have been miſled by the name *caſcarilla*; which is applied by the Spaniards to the Peruvian bark ſtrictly ſo called, and ſignifies no more than bark in general. See Hoffman's *Diſſertatio de caſcarilla, anno* 1738. *Operum omnium ſupplement.* ii. *par.* i. *p.* 704.

(c) Acta laboratorii chymici, Specim. ii. *cap.* ix & x. *edit. ann.* 1693. & *de febribus intermittentibus conſult. nov. cap.* xvi.

common alexipharmacs and ſudorifics were found ineffectual: but the powder or extract of eleutheria, joined with them, proved ſuccefsful, even after petechiæ had appeared: dyſenteries, ſucceeding the fever, were removed by the ſame means. During the uſe of the eleutheria, the patient generally ſweated plentifully, without loſs of ſtrength or other inconvenience: the belly was at the ſame time kept open, and thoſe who did not ſweat had commonly three or four ſtools a day: where the menſtrual or hæmorrhoidal fluxes were ſuppreſſed at the beginning of the diſorder, they generally, upon the uſe of this medicine, reappeared *(a)*.

The gentlemen of the French academy found this bark of excellent ſervice againſt an epidemic dyſentery in the year 1719; in which, ipecacoanha proved ineffectual. Mr. Boulduc obſerves, that this laſt left a lowneſs of the ſpirits, and weakneſs of the ſtomach, which continued for a long time: whereas the eleutheria ſoon raiſed the ſtrength, and promoted appetite *(b)*.

At preſent, eleutheria is in great eſteem among the Germans, as a warm ſtomachic and corroborant, in flatulent colics, internal hæmorrhagies, dyſenteries, the diarrhœæ of acute fevers, and in common intermittents; in which laſt it is often joined to the Peruvian bark, and by many preferred to it, as being leſs ſubject to ſome inconveniences, which the other, by its great aſtringency, is apt to produce. Among us, it has but lately been received into practice; and its uſe is not yet become ſo general as it well deſerves to be.

The virtues of eleutheria are partially extracted by water, and totally by rectified ſpirit: after the action of the former, it retains a conſiderable ſhare of its flavour, after the latter it proves inodorous and inſipid: the watery tinctures are of a reddiſh brown, the ſpirituous of a browniſh orange colour. Diſtilled with water, it yields a greeniſh eſſential oil, of a very pungent taſte, and of a fragrant penetrating ſmell, more grateful than that of the caſcarilla itſelf, in quantity, according to Hoffman's experiments, not exceeding one dram from ſixteen ounces: the decoction, inſpiſſated, leaves an extract of a moderate dull bitterneſs, much weaker than might have been expected from the ſtrong taſte of the bark in ſubſtance.

(a) Hiſtorica relatio febris epidemicæ, edita anno 1697.

(b) Hiſtoire de l'acad. royale des ſciences, pour l'ann. 1719.

ſtance. On inſpiſſating the ſpirituous tincture, with a gentle heat, nothing conſiderable of the active matter of the caſcarilla was found to ariſe with the menſtruum: the remaining extract, nevertheleſs, was rather weaker in taſte than the bark itſelf, and when thoroughly exſiccated, ſcarcely diſcovered any taſte at all, being almoſt a pure reſin, not diſſoluble by the ſaliva. It is probably the dry pulverable extract that Cartheuſer means, when he ſays it has no taſte; and the extract in its moiſt ſtate that was examined by Boulduc, who ſays it is bitter, biting, and aromatic.

ELICHRYSUM.

ELICHRYSUM ſive Stœchas citrina Pharm. Pariſ. Elichryſum ſive ſtœchas citrina anguſtifolia C. B. Gnaphalium Stœchas Linn. GOLDILOCKS: a ſmall, ſhrubby, downy plant; cloathed with long, very narrow leaves: producing, on the tops of the branches, ſeveral ſmall round heads of bright yellow ſcaly flowers. It is a native of the ſouthern parts of France, flowers in our gardens in May and June, and holds its leaves all the winter.

THE flowers or ſcaly heads of this plant, naturally dry and firm, retain their figure and gloſſy yellow colour for years. Both the flowers and leaves, rubbed a little, yield an agreeable and moderately ſtrong ſmell: to the taſte they diſcover a conſiderable warmth, pungency, and bitteriſhneſs: from whence it may be preſumed, that the aperient and corroborant virtues, commonly aſcribed to them, are not wholly without foundation.

ENDIVIA.

ENDIVIA Pharm. Edinb.(a) Intybus ſativa latifolia ſive endivia vulgaris C. B. Cichorium endivia Linn. ENDIVE: a common culinary plant, reſembling cichory in the flowers and ſeeds; and differing from it chiefly in being annual, and in the leaves being ſhorter, broader, and only ſlightly crenated, not jagged, about the edges.

(a) Expunged.

Endive agrees with cichory in quality as in appearance; containing, like it, a milky juice, of a bitteriſh taſte, which it loſes on being blanched by culture: the greener the colour of the leaves, the greater is the bitterneſs of the whole plant. In its bittereſt ſtate, however, it is ſomewhat leſs ſo than the cichory.

ENULA CAMPANA.

ENULA CAMPANA Pharm. Lond. Enula campana ſeu helenium Pharm. Edinb. Inula Geſn. hort. Helenium vulgare C. B. Aſter omnium maximus Tourn. Inula Helenium Linn. Elecampane: a large plant, with long, wrinkled, oval, acuminated leaves, ſerrated about the edges, pale green above, and hoary underneath, joined cloſe to the ſtalk, which divides towards the top into ſeveral branches, bearing large yellow flowers of the radiated diſcous kind, followed by oblong ſeeds winged with down: the roots are ſhort and thick, ſomewhat unctuous to the touch, brown or blackiſh on the outſide, and whitiſh within. It is perennial, grows wild in moiſt rich ſoils, and flowers in June.

The freſh roots of elecampane have a weak not very grateful ſmell; which, on thoroughly drying and keeping them for ſome time, is greatly improved, and approaches to that of Florence orris. Chewed, they diſcover at firſt a kind of rancid glutinous taſte, quickly ſucceeded by an aromatic bitterneſs, which by degrees becomes conſiderably pungent.

This root ſtands recommended as a diaphoretic and ſtomachic, for promoting expectoration in humoural aſthmas and coughs, and for attenuating viſcid juices in general, and diſpoſing them to excretion: taken freely, it is ſaid to gently looſen the belly, and increaſe the urinary diſcharge. The doſe of the dry root in ſubſtance is from a ſcruple to a dram or two.

It gives out its virtue partially to aqueous, totally to ſpirituous menſtrua: the former it tinges of a muddy yellowiſh, the latter of a bright pale yellow colour. In diſtillation with water, it gives over an eſſential oil, which concretes into white flakes, partly ſwimming on the water, and partly ſubſiding, in quantity about one dram from thirty ounces, of no great heat or pungency, ſmelling at firſt pretty ſtrongly of the elecampane, but very apt to loſe its ſmell in keeping. Great part of the

aromatic

aromatic warmth and pungency, as well as the bitterneſs, reſide in a matter of a more fixt kind, which does not eaſily exhale in the heat of boiling water, and is preſerved in tolerable perfection in the watery extract. Rectified ſpirit elevates little or nothing from this root: the ſpirituous extract is conſiderably ſtronger than the watery, though its pungency is not near ſo great as might be expected conſidering the ſmallneſs of its quantity: it ſcarcely exceeds one fifteenth the weight of the root, whereas the watery extract amounts to almoſt one half.

Extractum enulæ camp. *Ph. Lond.*

EPITHYMUM.

EPITHYMUM Ph. Pariſ. Epithymum ſive cuſcuta minor C. B. Cuſcuta Epithymum Linn. DODDER OF THYME: a plant without leaves, growing on thyme, conſiſting of a number of ſlender juicy filaments, producing here and there ſmall heads of white or reddiſh flowers, which are followed by roundiſh capſules full of minute ſeeds. Dodder receives its nouriſhment from the vegetable on which it climbs, its own roots quickly periſhing. A large kind, vulgarly called hellweed, is common in heaths, upon furzes, nettles, *&c.* and in fields of flax and other manured herbs. The ſmaller ſort, found upon thyme, has been generally preferred for medicinal uſe, and imported to us from Turkey and Leghorn, intermixed with ſtalks and tops of thyme. It is ſuppoſed by ſome, that the dodder partakes of the qualities of the plant by which it is ſupported.

DODDER of thyme has a pretty ſtrong not diſagreeable ſmell, and a peculiar kind of ſubtile pungent taſte, very durable in the mouth, and ſinking as it were into the tongue. Though it was early received into medicine, its medicinal qualities are not as yet known. The ancients accounted it cathartic, but when given by itſelf it is found to have very little purgative virtue. Some late writers recommend it rather as a deobſtruent, in melancholic and other diſorders. It is in this country an entire ſtranger to practice; though the remarkable ſubtilty of its taſte ſeems to promiſe ſome conſiderable medicinal power.

EQUISETUM.

CAUDA equina ſive Equiſetum Ph. Edinb.(a) *Equiſetum paluſtre longioribus ſetis C. B. Hippuris vulgaris Linn.* Horsetail: a plant, with a thick hollow ſtraight ſtalk, full of joints; and long, ſlender, rough, ſtiff, jointed, ruſh-like leaves, ſtanding ſeveral round every articulation in form of a ſtar. It is perennial, and common in watery places.

The leaves of equiſetum have been accounted powerfully aſtringent, and hence recommended in different fluxes and hemorrhagies: the doſe commonly directed is a dram of the dry leaves in powder, or two ounces of the expreſſed juice. They appear, indeed, from their ſenſible qualities, to have ſome virtues of this kind, but in a very low degree: in the leaves themſelves, the aſtringency is ſo weak, that the taſte ſcarcely gives any notice of it, though ſolution of chalybeate vitriol renders it apparent by the inky blackneſs it receives from them: the aſtringent matter is extracted both by watery and ſpirituous menſtrua, and when concentrated by inſpiſſating the infuſions, proves ſtill of ſo weak a kind, and in ſo little quantity, that the plant can be ranked only among the milder reſtringent corroborants. In this intention, an infuſion of the dried herb may be uſed as tea.

ERIGERUM.

ERIGERUM ſive Senecio Pharm. Edinb.(a) *Senecio minor vulgaris C. B. Senecio vulgaris Linn.* Groundsel: a low, branched plant, with oblong narrow leaves, deeply cut into wing-like ſections, joined to the ſtalk by broad baſes: on the tops grow numerous yellow flowers, of the naked diſcous kind, ſet in large cups, and followed by ſmall ſeeds winged with down. It is a common annual weed in dry grounds.

The leaves of groundſel have an herbaceous ſomewhat ſaline taſte, and no remarkable ſmell. They ſtand recommended, externally, as a vulnerary and refrigerant, internally as a mild and ſafe emetic. The

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(a) Expunged.

expreſſed juice, or an infuſion or decoction of the herb, are by ſeveral writers directed in this laſt intention, but neither of them appear to have any conſiderable effect: perhaps thoſe, who aſcribe to them an emetic power, were impoſed on by giving ſuch large doſes, as to nauſeate the ſtomach by the quantity of fluid.

ERUCA.

ROCKET: a plant with ſmooth oblong narrow leaves deeply jagged about the edges, bearing on the tops of the ſtalks numerous tetrapetalous flowers, which are followed by angular pods, full of ſmall roundiſh ſeeds flatted on one ſide. It is annual.

1. ERUCA: *eruca latifolia alba, ſativa dioſcoridis C. B. Braſſica Eruca Linn.* Garden or Roman rocket, or rocket gentle: with leaves like thoſe of turneps, but much ſmaller; and whitiſh flowers variegated with black ſtreaks. It is a native of Switzerland, and cultivated among us in gardens.

2. ERUCA SILVESTRIS: *eruca ſylveſtris major lutea caule aſpero C. B. Braſſica Erucaſtrum Linn.* Wild rocket: with leaves like thoſe of dandelion, and yellow flowers; common on old walls, and among rubbiſh.

THE leaves of both the rockets have an acrid taſte like that of creſſes, and a rank diſagreeable ſmell: the roots are as acrid as the leaves: the ſeeds much more ſo, approaching to the pungency of muſtard. The wild ſort is, in all its parts, conſiderably more acrid than the garden, though the faculty of Paris allows both ſorts to be taken indiſcriminately. They are accounted good aperients and antiſcorbutics, but are now rarely made uſe of on account of their ill flavour: to the aphrodiſiac virtues, commonly aſcribed to them, they appear to have no other title than the reſt of the pungent ſtimulating plants.

The active matter of the leaves is extracted by expreſſion, by infuſion in boiling water, and by digeſtion or maceration in rectified ſpirit; with this difference, that the infuſions and tinctures retain the ill ſmell of the herb, which in expreſſion is in great meaſure deſtroyed. On drying the herb itſelf, or inſpiſſating the juice of the watery or ſpirituous tinctures, the pungency, as well as the ſmell, is almoſt totally diſſipated. In diſtillation with water, a very ſmall quantity of a yellowiſh, very pungent, and very volatile eſſential oil is obtained.

The pungency of the ſeeds is of a leſs volatile kind; not exhaling in exſiccation, and ariſing more difficultly with water in diſtillation: and though it appears to reſide, as that of the leaves, in an eſſential oil, it is but partially extracted by rectified ſpirit. In theſe reſpects the ſeeds of rocket agree with thoſe of muſtard; to which they appear to be ſimilar alſo, but inferiour, in medicinal virtue.

ERYNGIUM.

ERYNGIUM Pharm. Lond. Eryngium maritimum C. B. & Linn. ERYNGO or SEA HOLLY: a blueiſh, branched, umbelliferous plant, with mallow-like, thick, prickly leaves, angular or jagged about the edges: the flowers are white and ſet in prickly heads, under which a number of little oblong leaves ſtand in form of a ſtar: the roots are ſlender, very long, with a few knots, browniſh on the outſide, and white within. It is perennial, grows plentifully on ſome of our ſandy and gravelly ſhores, and flowers in July.

ERYNGO roots have an agreeable ſweetiſh taſte, which on chewing them for ſome time is followed by a light aromatic warmth and pungency. They are accounted aperient, diuretic, and aphrodiſiac: Boerhaave ſays they are the principal of the aperient diuretic roots, and that he conſtantly made them an ingredient in his preſcriptions againſt ſcurvies: their virtues, however, appear to be but weak, and they are now ſcarcely otherwiſe uſed than as made into a ſweetmeat.

ERYSIMUM.

ERYSIMUM Pharm. Edinb. (a) *Eryſimum vulgare C. B. Irio ſive eryſimum dioſcoridis Lob. Eryſimum officinale Linn.* HEDGE MUSTARD: a hairy plant, with oblong narrow leaves, divided into wing-like ſections, triangular at the extremity; and tough, branched ſtalks, bearing numerous ſmall, yellow, tetrapetalous flowers, which are followed by ſhort roundiſh pods, ſtanding cloſe to the ſtalks, full of ſmall reddiſh brown ſeeds. It is annual, common in waſte places, and flowers in July.

(a) Expunged.

The leaves of eryſimum are ſaid to be attenuant, expectorant, and diuretic; and ſtand particularly recommended againſt chronical coughs, and hoarſeneſs, whether humoural, or occaſioned by immoderate exertion of the voice. Lobel greatly commends for this purpoſe a compound ſyrup, which, as Geoffroy obſerves, is not ſuperiour to a ſimple mixture of the expreſſed juice of the herb with honey; and indeed it is not very clear whether the virtue of the honey is much improved by the eryſimum. The herb has no ſmell, and its taſte, at leaſt when moderately dried, is little other than herbaceous, with ſomewhat of a ſlight ſaline impregnation.

The ſeeds of eryſimum are conſiderably pungent, and appear to be nearly of the ſame quality with thoſe of muſtard, but weaker. Their acrimony, like that of muſtard-ſeed, is extracted totally by water, and partially by rectified ſpirit, and ſtrongly impregnates water in diſtillation.

EUPATORIUM.

EUPATORIUM arabum Pharm. Pariſ. Eupatorium cannabinum C. B. & Linn. Hemp agrimony: a plant with oblong, acuminated, deeply indented leaves, ſet three on one pedicle, and the pedicles in pairs: the flowers, which ſtand in umbel-like cluſters, conſiſt of purpliſh floſculi ſet in ſcaly cups, followed by oblong ſeeds winged with down. It is perennial, grows wild by the ſides of rivers and ditches, and flowers in July.

The leaves of eupatorium have a light agreeable ſmell, and a pungent very bitter taſte. They are recommended as aperients, laxatives, and corroborants; in beginning dropſies, jaundices, intermitting fevers, and other conſequences of obſtructions of the viſcera, ſucceeding frequent relapſes into acute, or a long continuance of chronical diſeaſes. They are ſaid to be the common medicine of the turf-diggers in Holland, againſt the ſcurvies, foul ulcers, and ſwellings of the feet, to which they are ſubject. Infuſions of the herb may be drank as tea, or the expreſſed juice taken in doſes of one, two, or three ounces; in large quantity, it purges or vomits.

EUPHORBIUM.

EUPHORBIUM Pharm. Edinb.(a) EUPHORBIUM: a gummy reſinous concrete juice; exuding from an oriental, prickly, lacteſcent ſhrub, of the ſame name, *euphorbia (officinarum) aculeata nuda multangularis: aculeis geminatis Linn. ſpec. plant.* The juice is brought immediately from Barbary, in drops or tears of an irregular form; ſome of which are found, on being broken, to contain little thorns, twigs, flowers, and other vegetable matters; others are hollow, without any thing in the cavity: the tears are in general eaſy to break, of a pale yellow and ſometimes of a gold colour on the outſide, and white within.

EUPHORBIUM, applied lightly to the tongue, diſcovers a ſharp biting taſte: held for ſome time in the mouth, it proves vehemently acrimonious, inflaming and exulcerating the parts. The finer duſt which flies off in pulverization, unleſs great care is taken to avoid it, is apt to affect the operator's head and throat in a violent manner.

It conſiſts of about equal parts of reſinous and gummy matter. The acrimony reſides chiefly in the former; the ſpirituous tincture being exceſſively fiery, and when inſpiſſated ſtill more ſo; whereas the watery infuſion and extract are bitteriſh with only a ſlight, though a very durable acrimony. A ſingle drop of a ſtrong ſpirituous tincture produces in the mouth a ſenſation of burning, which, as Cartheuſer obſerves, is ſcarcely to be obtunded by mucilages or oils in leſs than an hour. It gives over nothing in diſtillation either to water or ſpirit.

The extreme acrimony of this drug renders it abſolutely unfit for any internal uſe: ſeveral correctors have indeed been propoſed for abating its virulence, but the beſt of them are not to be truſted to. It is employed only, and that but ſeldom, for external purpoſes; in ſtimulating unguents and plaſters for paralytic limbs, carious bones, *&c.* Some have ventured on a minute portion of it, mixed with other powders, as an errhine, in obſtructions of the noſtrils, and mucous diſorders of the head; a practice by no means adviſeable, as we are in no want of medicines for theſe purpoſes, equally effectual, and far more ſafe. I have ſeen violent and dangerous inflammations produced by raſhly uſing even very ſmall quantities of it mixed with ſnuffs.

(a) Expunged.

EUPHRASIA.

EUPHRASIA Pharm. Edinb. (a) *Euphraſia officinarum C. B. & Linn.* EYEBRIGHT: a ſmall herb, with little, oval, ſerrated leaves, ſet in pairs, without pedicles: in their boſoms, towards the tops of the ſtalks, come forth labiated, monopetalous, whitiſh flowers, ſtreaked internally with purple and yellow; followed each by a flattiſh capſule, full of ſmall whitiſh ſeeds. It is annual, grows wild in uncultivated grounds, and flowers from July to September.

THIS plant has long been celebrated as an ophthalmic, both taken internally, and applied externally. Hildanus ſays, he has known aged people, who had their ſight impaired, recover it again by the uſe of this herb; but later practitioners have not been ſo happy as to meet with the like ſucceſs. It may indeed, in ſome caſes, be of ſervice as a mild corroborant; for it diſcovers an aſtringent quality to the taſte, and, in a more ſenſible manner, by ſtriking a black colour with ſolution of chalybeate vitriol. The aſtringent matter is extracted both by water and ſpirit; and when concentrated by inſpiſſating the tinctures, is ſtill found to be very weak.

FEL.

FEL ſive Bilis. GALL or BILE: a bitter animal juice, ſecreted from the blood in the liver, and collected in a particular receptacle. The galls of the ox, the eel, and the pike fiſh, have been chiefly made uſe of in medicine.

THIS fluid mingles uniformly with water, ſpirit of wine, fixt alkaline lixivia, and volatile alkaline ſpirits, without change of its yellow colour. The concentrated mineral acids coagulate and render it whitiſh: diluted acids, thoſe at leaſt of the vegetable and animal kingdom, change it green: the addition of alkalies to the green mixtures reſtores the natural yellow colour of the bile. Inſpiſſated by heat, it diſſolves almoſt totally in water, but is more ſparingly acted upon by rectified ſpirit *(a)*. It renders oily, unctuous, and reſinous ſubſtances miſcible with watery liquors; preſerves milk from coagulating or turning ſour, and rediſſolves it when already coagulated. Such at leaſt are the properties of the gall of the ox: how far that of other animals agrees with or differs from it in theſe reſpects, is not known *(b)*.

(a) Expunged.

This ſtimulating reſolvent bitter has been given, and as is ſaid with good ſucceſs, for opening obſtructions of the viſcera, promoting urine, the menſes, and labour pains: in this laſt intention, the gall of the eel, which is ſaid to be one of the moſt acrid, has been chiefly recommended. Boerhaave relates, that he has cured pale ricketty children by pills made of the galls of the eel and the pike; that the medicine operated powerfully by urine; and that, by its uſe, the belly, before ſwelled, ſubſided ſurprizingly *(c)*. In want of appetite and other complaints proceeding from a deficiency of bile in the firſt paſſages, this animal bitter may probably be of more ſervice, than thoſe of the vegetable kingdom uſually directed in ſuch intentions. Among us theſe fluids are employed only for external purpoſes: a mixture of ox gall with camphorated ſpirit of wine is ſaid to be an uſeful embrocation for ſprains, bruiſes, rheumatic pains, *&c.*

FERRUM.

IRON: a greyiſh, hard metal, between ſeven and eight times ſpecifically heavier than water: diſtinguiſhed from all other metallic bodies, in its metallic ſtate, by its attracting, or being attracted by, the loadſtone; but loſing this attractive power on being reduced, by fire or menſtrua, to a calx: not fuſible without an intenſe white heat, and calcining, by a continuance of a weaker heat, firſt into blackiſh ſcales, and afterwards into a dark reddiſh powder: corroſible by moiſt air into a reddiſh yellow ruſt, and ſoluble in all acids, from which it precipitates

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(a) Cartheuſer, *Fundamenta mat. med. ſect.* ix. *cap.* i. *Edit. Pariſ. tom.* i. *p.* 519.

(b) *Vide* Baglivi, *Diſſertationes variæ, diſſ.* iii. *de experiment. circa bilem. Opp. p.* 428, *ſeqq.*

(c) *Praxis medica, tom.* i. *p.* 164.

all the common metallic bodies except zinc: forming with the marine acid a yellow, with the nitrous a dark red, and with the vitriolic a pale green ſolution; which is changed to an inky blackneſs by the addition of a little galls, and by moſt of the other vegetable aſtringents, and to a reddiſh or purple by a mixture of aſtringents with a minute proportion of any alkaline ſalt. All the ſolutions, by whatever acid effected, on the addition of a lixivium of alkaline ſalts that have been calcined and fully impregnated with animal coals *(a)*, are changed to a deep blue, and on ſtanding depoſite the iron in form of a powder of the ſame colour. By theſe characters, a moſt minute portion of iron may be diſcovered in liquors.

Cæruleum berolinenſe; Pruſſian blue.

Ores of iron, and minerals more ſlightly impregnated with it than thoſe which are ſtrictly called ores, are common in moſt parts of the world: the red and yellow earths and ſtones generally owe their colour to an admixture of this metal. The iron, extracted from the ore by fuſion in large furnaces in mixture with the fuel, is impure and brittle: being again laid on burning charcoal in a ſmaller furnace or forge, and melted down, a quantity of ſulphureous ſcoria ſeparates, the iron proves leſs fuſible, leſs brittle, and by two or three repetitions of the proceſs, becomes tough enough to be forged into bars. The iron thus purified is employed as an article of the materia medica in two ſtates.

1. FERRUM *Pharm. Lond.* *Ferrum ſive Mars Pharm. Edinb.* Iron, or forged iron: iron in its ſofteſt ſtate; capable of being eaſily filed; acquiring little or no additional hardneſs on being made red hot and quenched in water; appearing, when broken, of a fibrous texture; exceeding difficult of fuſion, and perhaps not fuſible at all by common fire without the contact of the fuel or other additions.

2. CHALYBS *Pharm. Lond.* Steel: iron in a hard ſtate, ſo as to reſiſt the file, or acquiring this hardneſs by heating and quenching it; when broken, of a fine granulated texture; much eaſier of fuſion, ſome-

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(a) Volatile alkaline ſpirits may be completely ſaturated with the matter which tinges diſſolved iron blue, by digeſting them with the pigment called Pruſſian blue; from which they acquire a yellowiſh or greeniſh tincture, leaving the iron in form of ochre or a ruſty coloured calx.

what more difficult of ſolution, and ſomewhat leſs ſubject to ruſt in the air, than ſoft iron. Iron, cemented in cloſe veſſels, with vegetable or animal coals, becomes ſteel; and ſteel, kept red hot for ſome time in an open veſſel, becomes ſoft iron again.

THIS metal, when diſſolved, diſcovers a ſtrong auſtere corrugating taſte, and contracts and hardens all the vaſcular and ſoft fibrous parts of animals. To conſtringe and corroborate the animal ſolids appears to be its primary medical operation.

In weak, lax, pale habits, and in chronical diſorders proceeding from languor and debility, cachectic, hypochondriacal, and others, this metal has generally good effects: ſtrengthening the ſtomach, and chylopoietic organs, and the ſyſtem in general; quickening the circulation and raiſing the pulſe; rendering the blood more florid, and as it were expanding and rarefying the juices; promoting, when they are deficient, and reſtraining, when immoderate, the ſecretions that are made from the blood, as perſpiration, urine, and the uterine purgations; but for the moſt part binding the belly, though this evacuation alſo, in ſome circumſtances, it promotes.

By the ſame corroborating power, whereby it promotes deficient and reſtrains redundant diſcharges where the ſuppreſſion or flux ariſe from debility and relaxation; it, contrariwiſe, increaſes fluxes and confirms obſtructions when they proceed from tenſion, rigidity, or ſpaſmodic ſtrictures of the veſſels. Where either the circulation is quick, or the habit plethoric; by increaſing the blood's velocity, and all the plethoric ſymptoms, it produces heavineſs, dulneſs, vague heats and fluſhings, or kindles more dangerous fevers or inflammations, or burſts ſome of the over-diſtended ſmall veſſels.

In ſome conſtitutions, even where iron is proper and ſalutary, particularly in hyſterical and hypochondriacal caſes, and where the ſtomach is very weak, it is apt at firſt to occaſion great ſickneſs and perturbation: Sydenham obſerves, that theſe inconveniences may be, in ſome meaſure, prevented by beginning with very ſmall doſes, and giving it for a while only at bed-time, in conjunction with a ſlight opiate (a). In other circumſtances, it is commonly taken in the morning and afternoon, and moderate exerciſe uſed to promote its action. The doſe in all caſes ſhould be ſmall, and rather repeated than enlarged: a grain or half a grain of the metal, diſſolved or in a ſoluble ſtate, is generally a ſufficient doſe. Nidorous eructations, and the alvine feces being tinged of a black colour, are marks of its taking effect.

(a) *Diſſertatio epiſtolaris de variol. confluent. & affect. hyſteric. Oper. p.* 409.

Iron is ſometimes given in ſubſtance, reduced into fine filings; which anſwer, in many caſes, as well as its moſt elaborate preparations; but their action is leſs certain, as depending upon their meeting, in the firſt paſſages, with juices capable of diſſolving them: they are likewiſe the moſt ſubject, when they do act, to produce troubleſome eructations, probably from the property of this metal of yielding copious fetid vapours during its diſſolution. The doſe of the filings is from two or three grains to a ſcruple and more: it is probable that the whole quantity taken does not prove operative, even when the ſtomach abounds moſt with acidities; for on digeſting a ſcruple of the filings in a quarter of a pint or more of ſtrong vinegar, a very conſiderable proportion remains undiſſolved.

Ferri limatura purificata *Ph. Ed.*

Iron filings, procured from the common work-ſhops, may be cleanſed from earthy matters or fragments of other metallic bodies, by means of a magnet, though not ſo perfectly as could be wiſhed. When other metals have been previouſly melted with the iron, the filings of the compound cannot thus be ſeparated from thoſe of pure iron, the loadſtone attracting both: regulus of antimony is the only exception, this metal being found, even in a ſmall proportion, to deſtroy the magnetic power of the iron.

The filings are ſometimes candied with ſugar; a preparation which is very commodious for taking, but which requires a good deal of addreſs in the operator, and is made chiefly by the confectioners. Two parts of fine ſugar, diſſolved in water and boiled down to a candy conſiſtence, are added, by little and little, to one part of the cleanſed filings, in a kettle ſuſpended over a very gentle fire; and the veſſel continually ſhaken, that the filings may be cruſted over with the ſugar: to render the matter leſs ſubject to run into lumps, a little ſtarch is previouſly mixed with the ſugar, in the proportion of a dram to a pound.

Ferri rubigo, vulgo ferri limatura præparata *Ph. Ed.*

The filings, moiſtened with vinegar or water, and expoſed to a moiſt air, or occaſionally moiſtened afreſh, ſoon change in great part into ruſt, which may be ſeparated from the uncorroded part, by grinding and

Chalyis rubigo præparata *Ph. Lond.*

waſhing over the finer powder with water. The ruſt is given in the ſame doſe as the crude filings, and is perhaps rather eaſier of ſolution. Hoffman ſays, he has often uſed it, with remarkable ſucceſs, in obſtinate chlorotic caſes accompanied with exceſſive headachs and other alarming ſymptoms; and that he uſually joined with it pimpinella, arum root, and ſalt of tartar, with a little cinnamon and ſugar.

Chalybs cum ſulphure præparatus *Ph. Lond.*

A piece of ſteel, heated in a very fierce fire, as that of a ſmith's forge, to a ſtrong white heat, and immediately applied to a roll of brimſtone held over a veſſel of water, is in part corroded by the ſulphur, and, melting, falls down in brown coloured drops; which, picked out from the yellow ſtrings of ſulphur, and levigated into an impalpable powder, are given in the ſame doſes as the filings and ruſt, and nearly with the ſame effects.

As this proceſs is ſomewhat troubleſome and accompanied with offenſive fumes, the ſhops have been generally ſupplied with a ſulphurated preparation made more commodiouſly, by mixing iron filings with twice their weight of flowers of brimſtone, and as much water as will make them into a paſte, which on ſtanding at reſt for ſome hours ſwells up, and is then pulverized, put into a heated crucible to deflagrate, and kept conſtantly ſtirring with an iron ſpatula till it falls into a deep black powder.

Colcothar Vitrioli *Ph. Edinb.*

This powder, urged longer in the fire, becomes red, and in this ſtate has been uſually diſtinguiſhed in the ſhops by the name of aperient crocus: when further reverberated with a very intenſe heat, it is called aſtringent crocus. This notion, of oppoſite virtues in the two preparations, does not appear to have any juſt foundation; chalybeate medicines in general acting by an aſtringent power, though with different degrees of force. The college of Edinburgh allows colcothar of vitriol as a ſubſtitute both to the aperient and the aſtringent crocus; and indeed it appears to be at bottom, if duly prepared, the very ſame thing with them: all the three are no other than iron, that has been corroded by the ſulphureous or vitriolic acid, and afterwards by fire diveſted of greateſt part of the acid, and reduced to a ſtate of calx: the colcothar, however, as remaining after the diſtillation of the vitriol, commonly retains much more acid than the others, a circumſtance to be attended to in the ſubſtitution of it. In all theſe kinds of preparations, only a ſmall quantity of the metal is in a ſoluble or active ſtate, more or leſs according to the proportion of acid: when iron is perfectly calcined, and no acid combined with it, it has ſcarcely any ſenſible operation.

Oil of vitriol, diluted with from equal to five or ſix times its meaſure, or more, of water, and aſſiſted by a gentle heat, acts readily on iron, and emits, during its action, a ſtrong ſulphureous vapour, which on the approach of any flaming body, catches fire and explodes, ſo as ſometimes to burſt the veſſel, eſpecially if its mouth is narrow. The ſolution filtered, and evaporated till a pellicle appears on the ſurface, yields, on ſtanding in the cold, green cryſtals, the ſame with the common green vitriol. To four parts of oil of vitriol ſome direct three of the iron filings†; others, that the acid may prevail a little, and the cryſtals be leſs ſubject to grow ruſty coloured in the air, only two‡.

† Vitriolum martis, ſeu ſal chalybis *Ph. Edinb.*

‡ Sal martis *Ph. Lond.*

The marine acid diſſolves much leſs of this metal than the vitriolic: on macerating half a pound of iron filings in three pounds of ſpirit of ſalt till the acid ceaſes to act, a notable quantity remains at laſt undiſſolved. The ſolution is exceſſively ſtyptic, far more ſo than the combinations of iron with any other acid: it has likewiſe this peculiarity, that it mingles equally with, and when inſpiſſated diſſolves in, rectified ſpirit of wine; on which foundation the ſpirituous chalybeate tinctures depend. Some inſpiſſate the marine ſolution, made in the quantity above mentioned, to the weight of a pound, and then add three pints of rectified ſpirit: others diſſolve three ounces of clean iron ſcales in a ſufficient quantity of the acid, and then add ſo much rectified ſpirit as to make the weight of the whole, two pounds and a half. Of theſe tinctures, a few drops are a ſufficient doſe.

Tinct. martis in ſpiritu ſalis *Ph. Lond.*

Tinct. martis *Ph. Edin.*

On grinding iron filings, or waſhed colcothar of green vitriol, with equal or twice their weight of ſal ammoniac, moiſtening the mixture with water, gently drying it, and repeating the pulverization, humectation, and exſiccation, a few times; the iron is in a conſiderable degree attenuated, and on ſublimation with a quick fire, ſo much of it ariſes with the ſalt as to communicate a deep yellow or orange colour. If the iron and ſal ammoniac be only mixed together, and the ſublimation performed with a ſlow fire, ſuch as a glaſs retort will bear, the flowers prove at firſt pale, and require, in order to their being ſufficiently tinged with the metal, to be ground with the reſiduum, ſublimed again, and this proceſs repeated. Theſe flowers have a very pungent auſtere taſte, and are ſuppoſed to be more aperient and attenuating than the other chalybeates, by

Flores martiales *vulgo* Ens Veneris *Ph. Edinb.*

Flores martiales *Ph. Lond.*

by virtue of the ſaline matter joined to the iron. They are moſt conveniently given in the form of a bolus, from three or four grains to twenty: they occaſion pills to ſwell and crumble, except ſuch as are compoſed of gummy reſins: in a liquid form they are nauſeous, except in ſpirituous tinctures. A tincture made by digeſting four ounces of the flowers in a pint of proof ſpirit, is a ſufficiently elegant chalybeate, and may be given in doſes of a tea-ſpoonful.

Tinct. florum martialium *Ph. Lond.*

The matter which remains after the ſublimation of the flowers, expoſed to a moiſt air, runs into a liquid, in taſte extremely ſtyptic, and greatly reſembling a ſaturated ſolution of iron made in ſpirit of ſalt; the marine acid and volatile alkali of the ſal ammoniac being in part ſeparated from one another in the proceſs.

Lixivium martis *Ph. Lond.*

Solutions of iron in vegetable acids are much more mild, and leſs ungrateful both to the palate and ſtomach, than ſuch as are made in the acids of the mineral kingdom. Vinegar, juices of oranges, lemons, apples, and other fruits, acidulous wines, and tartar, have been made uſe of for this purpoſe. A vinous tincture is prepared in the ſhops, by macerating three ounces of iron filings, for four weeks, in three pints of Rheniſh; to which a ſlight aromatic impregnation is given, by three drams of cinnamon and the ſame quantity of mace. The doſe of the tincture is from a tea-ſpoonful to a common ſpoonful and upwards. For making theſe kinds of preparations, fine iron wire, cut in pieces, is more eligible than the filings, as we may always depend on the wire being pure iron, and as, by lying looſer, and expoſing a larger ſurface to the fluid, it is more eaſily acted on.

Vin. chalyb. *Ph. Lond.*

Some direct ſolutions of iron made in wine, or other vegetable acids, to be inſpiſſated to the conſiſtence of an extract. Theſe kinds of preparations are commodious for ſome purpoſes, particularly for being made into pills; as being tenacious enough to give a due conſiſtence to a conſiderable admixture of powdery matters. They are moſt of them very apt to grow mouldy in keeping; an extract made with the juice of golden rennets is ſaid by Neumann to be free from this inconvenience.

Extract. mart.

A combination of iron with the acid of tartar is moſt commodiouſly obtained, by grinding the filings with equal their weight of cryſtals of tartar, forming the mixture into a maſs with water, then pulverizing, and repeating the humectation and exſiccation alternately, till the whole falls into an impalpable powder. This is a very elegant and uſeful chalybeate,

Mars ſolub. ſeu chalybs tartarizatus.

chalybeate, the tartar rendering almoſt all the iron diſſoluble. It is given either in a ſolid or liquid form, from two or three grains, to ten or more. It has been uſually diſtinguiſhed in the ſhops by the name of its inventor Dr. Willis.

If the mixture of iron filings and tartar be calcined in a crucible for ſome time with a red heat, and ſuch part as cannot eaſily be reduced into fine powder, calcined again; the tartar will be converted into a fixt alkaline ſalt, and by this alſo the iron will be in part corroded and rendered ſoluble. There are ſeveral other methods of obtaining alkaline ſolutions of iron; but theſe kinds of combinations appear ill adapted for medicinal uſe, and are at preſent wholly neglected.

Mars ſolub. alkalizatus.

Some have made trial of the blue precipitate of iron called Pruſſian blue, and report that it ſeemed to act as a diaphoretic, and in ſome caſes as an aperient (a). Of all the known preparations of iron, this promiſes the leaſt activity: the perfect calces, almoſt if not wholly inert, are ſoluble in certain acids, particularly in the marine; but the Pruſſian blue is not acted upon by any kind of acid menſtruum.

*FILIX.

***FILIX MAS** Pharm. Edinb. Filix non ramoſa dentata C. B. Polypodium Filix mas Linn.* MALE FERN: a plant of that claſs which has the fructification at the back of the leaves. This ſpecies has large doubly-pinnated unbranched leaves, with ſtalks riſing ſingly from the root. The root conſiſts of an oblong ſcaly body, terminating in numerous fibres. The plant grows commonly under hedges.

THE efficacy of fern root againſt worms was known in the time of Dioſcorides; and towards the beginning of this century, Meſſrs. Audry and Marchant publiſhed accounts of ſucceſsful modes of exhibiting it in theſe caſes. It was, however, fallen into neglect, till a few years ago, when it came again into notice, by being diſcovered to be the remedy which had become greatly celebrated in Switzerland as a ſpecific in the cure of the tænia or tape-worm. The ſecret was purchaſed by the king of France, after its efficacy had been atteſted upon trial by ſome of the principal phyſicians at Paris. The following has been publiſhed as the mode of its exhibition. After the patient has been prepared by an emollient clyſter and a ſupper of panada with butter and ſalt, he is directed to take in bed in the morning a doſe of two or three drams of the powder of male fern root. The doſe to infants is only one dram. The powder muſt be waſhed down with a draught of water, but nothing elſe muſt be taken till two hours after, when a bolus of calomel, joined with ſome of the ſtronger cathartics, is to be given. If this does not operate, it muſt be followed by a doſe of purging ſalts. By this method, the worm is commonly expelled in a few hours. If the firſt trial does not ſucceed, the proceſs muſt be repeated at due intervals *(a)*.

(a) Geoffroy, *Memoires de l'acad. roy. des ſciences de Paris, pour l'ann.* 1743.

**FLAMMULA JOVIS.*

FLAMMULA JOVIS Stœrck, Pharm. Edinb. Flammula recta C. B. Clematis recta Linn. UPRIGHT VIRGIN'S BOWER: this ſpecies of clematis, diſtinguiſhed by its pinnated oval leaves, and erect ſtalk, grows wild in thickets in the ſouthern parts of France and Germany. Its leaves and flowers are extremely acrid; the former, when freſh, raiſing bliſters on the part to which they are applied.

The flammula jovis is one of the new medicines introduced by Dr. Stœrck. He has publiſhed ſeveral caſes of its efficacy in cancerous, venereal, and other malignant ulcers, obſtinate pains of the head and bones, inveterate itch, and other diſeaſes proceeding from peculiar acrimony. It was uſed internally, in infuſion of the flowers or leaves, and extract of the plant; and the powder was ſprinkled on the ulcers externally, where it was found to act as a moſt excellent eſcharotic and detergent. The medicine is ſaid to have proved diuretic to ſome patients, and ſudorific to others, but rarely to have moved the belly. Small doſes, of only half a grain of the exract, and half a dram of the dried leaves in infuſion, were at firſt exhibited, which were gradually increaſed.

(a) Précis du traitement contre le Ténia ou Ver ſolitaire, pratiqué a Morat en Suiſſe, examiné & approuvé a Paris. Publié par ordre du Roi. Paris, 1775.

FOENICULUM.

FOENICULUM; *Marathrum.* Fennel: an umbelliferous plant, with dark green leaves divided into long capillary ſegments: the umbels are ſomewhat concave, and have no leaves or cup at their origin: the ſeeds oval, oblong, marked with prominent ſtriæ: the root ſtraight, white, about the thickneſs of the finger.

1. Foeniculum dulce *Pharm. Lond. & Edinb. & C. B.* *Anethum Fœniculum Linn.* Sweet fennel: with whitiſh or pale greeniſh yellow ſeeds, generally crooked. It is annual, a native of the warmer climates, and cultivated in our gardens. The ſhops are commonly ſupplied, from Germany, with ſeeds, ſuperiour to thoſe of our own growth.

Sweet fennel ſeeds are an uſeful ſtomachic and carminative; of an agreeable aromatic ſmell, and a moderately warm ſweetiſh taſte. They are ſometimes given in powder, from a ſcruple to a dram; and ſometimes candied.

Aqua ſemin fœniculi *Ph. Lond.*

Ol. eſſentiale ſemin. fœnic dulcis *Ph. Lond.*

Water extracts the virtue of theſe ſeeds very imperfectly by infuſion, but carries it off totally in evaporation: after repeated infuſion, they retain part of their aromatic warmth, and the liquors are much leſs agreeable than the ſeeds in ſubſtance; after boiling for ſome time, the ſeeds prove entirely inſipid, and the decoction, inſpiſſated to the conſiſtence of an extract, is very nearly ſo. By diſtillation, they impregnate water with their flavour: a gallon receives a ſtrong impregnation from a pound of the ſeeds. A large proportion of eſſential oil ſeparates in the diſtillation, and floats on the ſurface of the aqueous fluid; in colour yellowiſh, in ſmell moderately ſtrong and diffuſive, and exactly reſembling the fennel, in taſte mild and ſweetiſh like the oil of aniſeeds, and like it alſo congealing, by a ſlight cold, into a white butyraceous maſs.

Theſe ſeeds contain likewiſe a conſiderable quantity of a groſs oil of the expreſſed kind, which, when freed from the eſſential oil, diſcovers no particular ſmell or taſte. This oil is extracted, along with the aromatic matter of the fennel, by digeſtion in rectified ſpirit, but ſeparates and riſes to the ſurface upon inſpiſſating the filtered tincture. The ſpirit, gently diſtilled off, has very little of the flavour of the ſeeds; the oily matter retains a part both of their taſte and ſmell; but much the greateſt part remains concentrated in the extract.

2. FOENICULUM VULGARE *Pharm. Edinb.* *Fœniculum vulgare germanicum C. B.* Common fennel or finckle: with ſmaller, dark coloured almoſt blackiſh ſeeds. It is now reckoned only a variety of the former.

THE ſeeds of this kind are warmer and more pungent, but leſs ſweet, and of a leſs grateful flavour, than thoſe of the preceding; and the ſame difference obtains in the diſtilled waters, diſtilled oils, and the ſpirituous extracts of the two kinds. The ſpirituous tinctures are ſomewhat different alſo, as the ſeeds themſelves, in colour: thoſe of the ſweet fennel ſeeds being yellowiſh, of the common greeniſh.

The leaves of common fennel have the ſame kind of flavour with the ſeeds, and are in ſmell ſtronger, though in taſte weaker and leſs agreeable. They impregnate water, by diſtillation, with a ſufficiently grateful flavour, and yield a conſiderable portion of eſſential oil. An extract made from them by rectified ſpirit is likewiſe no inelegant aromatic: the colour of the ſpirituous tincture is a deep green.

The roots, taken up early in the ſpring, have a pleaſant ſweetiſh taſte, with a ſlight aromatic warmth; but nothing of the peculiar ſtrong flavour of the leaves and ſeeds. They are ranked among the aperient roots, and ſuppoſed by ſome to be equivalent in virtue to the celebrated ginſeng of the Chineſe, from which however they differ conſiderably in their ſenſible qualities (ſee *Ginſeng).* They give out their virtue, by infuſion or ſlight coction to water, and by moderate digeſtion to rectified ſpirit: to the latter they communicate a pale amber colour, to the former a wheyiſh appearance. The aqueous infuſions are in taſte conſiderably the ſtrongeſt, but on being inſpiſſated, they yield an extract of very little taſte and in very ſmall quantity; greateſt part of the ſweetiſh matter as well as the aromatic being diſſipated in the evaporation. The ſpirituous extract is in larger quantity, about one twelfth the weight of the root, and of a moderately ſtrong taſte; agreeable, unctuous, ſweetiſh, lightly aromatic, with ſome ſmall admixture of bitteriſhneſs.

FOENUM GRÆCUM.

FOENUM GRÆCUM Pharm. Lond. & Edinb. Fœnum græcum ſativum C. B. Fœnu-græcum J. B. Trigonella Fœnum-græcum Linn. FENUGREEK: a plant with ſlightly ſerrated oblong or roundiſh leaves, ſet three on a pedicle; and whitiſh papilionaceous flowers, which are followed by long ſlender crooked flattiſh pods, containing yellowiſh rhomboidal ſeeds furrowed from angle to angle. It is ſown annually in the ſouthern parts of Europe, from whence the ſeeds are brought to us.

FENUGREEK ſeeds have a ſtrong diſagreeable ſmell, and an unctuous farinaceous taſte accompanied with a ſlight bitteriſhneſs. An ounce renders a pint of water thick and ſlimy: the decoction, inſpiſſated, yields an unctuous mucilaginous bitteriſh extract, retaining a conſiderable ſhare of the ill flavour of the ſeeds, and amounting to about three fourths their quantity. To rectified ſpirit they give out the whole of their diſtinguiſhing ſmell and taſte; and afterwards to water a ſtrong flavourleſs mucilage.

The principal uſe of theſe ſeeds is in cataplaſms and fomentations, for ſoftening, maturating, and diſcuſſing tumours; and in emollient and carminative glyſters. They are an ingredient in the *oleum e mucilaginibus* of the ſhops, to which they communicate a conſiderable ſhare of their ſmell.

FORMICA.

FORMICA Pharm. Pariſ. The ANT or PISMIRE: a ſmall, oblong, reddiſh or blackiſh inſect, furniſhed with a ſting: the male has four wings, naked or uncovered; the female none.

THIS inſect contains an acid juice; which it ſheds on being irritated; with which, by agitation or boiling, it impregnates both water and rectified ſpirit; leſs volatile than pure ſpirit, ſo as to be concentrable from the ſpirituous infuſion by drawing off a part of the menſtruum; not quite ſo volatile as water, a conſiderable part of the water ariſing firſt with only a ſlight acidulous impregnation, and the ſtrong acid coming over with the remainder; differing in its properties from all the other known acids; and approaching neareſt to thoſe produced from vegetables by fermentation. The ant contains likewiſe a groſs oil, ſeparable by boiling in water, riſing to the ſurface of the aqueous fluid, and ſimilar in its general qualities to the expreſſed oils of vegetables; as alſo a ſubtile oil, which comes over in diſtillation both with rectified ſpirit and with water, analogous to the vegetable eſſential oils, but wanting their pungent taſte *(a)*.

The medical qualities of this inſect, and its remarkable productions, are not certainly known. It has been generally ſuppoſed, that the ants in ſubſtance, and infuſions and diſtilled waters of them, have an aphrodiſiac virtue; a virtue for which the above analyſis does not appear to afford much foundation, though they are ſtill retained in the *aquæ magnanimitatis* and other like compoſitions in foreign pharmacopœias. The inſects in their chryſalis ſtate, commonly called ants eggs, (which diſcover no marks of acidity) are ſaid to be ſtrongly diuretic and carminative: a decoction of a ſpoonful of them in butter-milk has been directed by ſome to be taken every morning in dropſies. The acid is recommended by Hoffman as one of the beſt menſtrua of iron for medicinal uſes.

FRANGULA.

FRANGULA ſive Alnus nigra Pharm. Edinb. (b) Alnus nigra baccifera C. B. Rhamnus Frangula Linn. BLACK ALDER: a ſmall tree, or ſhrub, with ſlender flexible branches, and broad roundiſh leaves; bearing black berries, which contain a blue juice, with two ſeeds in each. It is common in moiſt woods in ſeveral parts of England.

THE internal yellow bark of this ſhrub is a ſtrong cathartic, and in this intention is ſometimes made uſe of by the common people in dropſies and other diſorders: it generally operates with great violence, occaſioning nauſeæ, ſickneſs, gripes, and often vomiting. An infuſion or decoction of it in water, inſpiſſated to the conſiſtence of an extract, acts with greater mildneſs than the bark itſelf. It gives a deep yellow tincture both to water and ſpirit.

(a) *Vide* Neumann, *Chemical works, p.* 497. Marggraf, *Memoires de l'acad. roy. de ſcienc. de Berlin, pour l'ann.* 1749.

(b) Expunged.

The berries alſo are ſtrongly purgative; but are ſcarcely ever made uſe of, at leaſt under their own name. In our markets, they are ſaid to be ſometimes ſubſtituted to thoſe of buckthorn; which laſt may be diſtinguiſhed by their green juice, and by their containing generally four ſeeds.

FRAXINUS.

FRAXINUS Pharm. Edinb.(a) *Fraxinus excelſior C. B. & Linn.* Ash: a tall tree common in woods and hedges; with a whitiſh bark, and oblong reddiſh brown ſeeds in ſhape ſomewhat reſembling a bird's tongue, whence their names *lingua avis*, *ornithogloſſum*, &c.

The bark of the aſh tree, when freſh, has a moderately ſtrong, bitteriſh, unpleaſant taſte, which in drying grows weaker. It has been given in ſubſtance from half a dram to a dram, and an extract made from it by water in ſmaller doſes, as a reſolvent and diuretic (b), and in intermitting fevers, in which it is ſaid to have often proved ſucceſsful, eſpecially when aſſiſted by fixt alkaline ſalts. Vander Mye reports, that at the ſiege of Breda, in defect of guaiacum, a decoction of this bark was made trial of in its place, and was found to be a potent ſudorific; that in conſequence of this diſcovery, it was given in peſtilential caſes, but that the decoction being diſguſtful by its quantity, a diſtilled water was ſubſtituted, which in doſes of two ſpoonfuls excited ſweat freely, and was ſalutary to many (c). It muſt be obſerved, that this water was diſtilled in a ſand heat, and is deſcribed as being ungrateful and ſmoky: from whence it appears to have been, not what is commonly called a diſtilled water, but an acid empyreumatic liquor, ſuch as is forced out by fire from all vegetables: whatever might have been its virtues in malignant diſeaſes, they apparently depended, not upon its being a preparation of aſh bark, but on its being an acid.

Among us, this bark is regarded only on account of a phenomenon, of more curioſity than uſe, obſerved in its watery infuſion, ſimilar to that of the infuſion of the lignum nephriticum. The liquor, if only ſlightly impregnated with the bark, on being held againſt the light, appears of a pale yellowiſh colour; looked down upon, or placed betwixt the eye and an opake object, blue: the addition of an acid deſtroys the blueneſs, and alkalies recover it again. The ſpirituous tincture exhibits the ſame variability of colour; with this difference, that againſt the light, it appears of a much deeper gold or orange yellow.

(a) Expunged. (b) Ducheſne, (*Quercetanus*) *Pharm. dogmat. reſtitut. cap.* 26.

(c) Fred. Vander Mye, *de morbis Bredanis*, *p.* 26.

The ſeeds of the aſh tree have been given to the quantity of a dram, as diuretics, aphrodiſiacs, and for reducing corpulent habits. They have a conſiderable taſte, of a bitteriſh, aromatic, not very agreeable kind.

FRUCTUS HORÆI.

FRUCTUS HORÆI Medicorum. Fraga, ceraſa, ribeſia, mora, fructus rubi idæi, &c. SUMMER FRUITS: ſtrawberries, cherries, currants, mulberries, raſpberries, *&c.*

THESE mild ſweet ſubacid fruits are ſometimes uſed medicinally, as refrigerants, antiſeptics, relaxants, attenuants and aperients. Boerhaave looks upon their continued uſe as one of the principal remedies in caſes of obſtruction and viſcidity, and in putrid diſorders *(a)*; and Hoffman gives inſtances of ſome obſtinate diſeaſes being cured by them *(b)*: they apparently promote the alvine and urinary excretions; and in ſome fevers, where watery liquors run off almoſt unchanged, theſe fruits or their juices render the urine coloured. As dietetic articles, they afford little nutriment, and are liable to produce flatulencies: to perſons of a bilious temperament and rigid fibres, and where the habit is diſpoſed, naturally or from extrinſic cauſes, to an inflammatory or putreſcent ſtate, their moderate, and even plentiful uſe, is ſalubrious: by thoſe of a cold inactive diſpoſition, where the veſſels are lax, the circulation languid, and the digeſtion weak, they ſhould be uſed very ſparingly.

The juices, extracted from fruits by expreſſion, contain their medicinal parts, freed from the groſſer indigeſtible matter. On ſtanding, they ferment, and change to a vinous or acetous ſtate: by a proper addition of ſugar, and by boiling, their fermentative power is ſuppreſſed, and their medicinal qualities preſerved. The inſpiſſated juices are found to be leſs flatulent, and leſs diſpoſed, when taken freely, to produce gripes and fluxes, than an equivalent quantity of the fruits in ſubſtance or of the juices unboiled.

(a) *Elementa chemiæ, proceſſ.* iii. *Praxis medica paſſim.*

(b) *Med. rational. de affectione phthiſica, obſ.* i. *Oper. tom.* iii. *p.* 295.

Syrup. mororum, & fructus rubi idæi *Ph. L.*

Theſe juices, purified from their feculencies by ſettling and ſtraining, are made into ſyrups by a leſs proportion of ſugar, than water or the common watery infuſions require. For a quart of the depurated juices of mulberries, raſpberries, *&c.* fifty ounces at moſt are ſufficient; whereas the generality of vegetable infuſions require fifty-eight. The more juicy berries give out their juice by heat without expreſſion: if equal parts of picked currants and ſugar be ſet over a gentle fire, the ſugar diſſolves in the juice of the fruit, and by boiling for a little time, an elegant jelly is formed, which may be freed from the ſkins by ſtraining. Theſe preparations may be occaſionally diſſolved in water, and uſed as diluents, reſolvents, *&c.* in acute and other diſeaſes.

The kernels of the ſtones of fruits, as of cherries, plums, *&c.* are of the ſame general nature with almonds. Thoſe which have any bitteriſhneſs or particular flavour, receive theſe qualities from a ſubtile principle; which is extracted by maceration in vinous ſpirits; which riſes in diſtillation with water; and which, when thus ſeparated from the oily and farinaceous matter of the kernel, and combined with only a ſmall quantity of the menſtruum, appears to be, like the flavouring matter of bitter almonds, poiſonous. Some phyſicians having found, that a diſtilled water very ſtrongly impregnated with black cherry kernels, no more than two pints being diſtilled from fourteen pounds of the ſtones bruiſed, proves poiſonous to brutes; the committee of the London college, appointed to reform their pharmacopœia, repeated the experiment with the ſame event.

FRUMENTUM.

FRUMENTA, Farinacea, Cerealia, Medicorum. Triticum ejuſque amylum & furfur; oryza; avena; hordeum, &c. BREAD-CORN or GRAIN: wheat, with the ſtarch made from it by maceration in water, and its bran; rice; oats, barley, *&c.**(a)

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*(a) The nutrimental matter in grain and other vegetables is, 1. ſtarch, which yields in analyſis the ſame principles with honey, ſugar, manna; viz. an acid, and an oil which ſinks: 2. glutinous vegeto-animal matter; the dark coloured ſubſtance which in ſtarch-making ſettles on the ſurface of the white, and is taken off for feeding hogs; of the ſame nature with the caſeous

These farinaceous ſeeds are leſs nutritious than the dietetic articles taken from the animal kingdom, but the nutriment they afford is milder and more benign: it is ſaid that gouty and other chronical diſorders, which are palliated or relieved by uſing milk for the only aliment, receive like relief from farinaceous aliments, provided the ſtomach is ſufficient for their digeſtion *(a)*. In all caſes, they are a neceſſary addition to animal food; and are, perhaps, the beſt correctors of the putrid diſpoſition which animal ſubſtances of themſelves would produce. The alimentary animal ſubſtances, which of themſelves run into high putrefaction, undergo, when mixed with the *farinacea*, a reſolution of another kind; the mixture tending, not to a putrid, but to an acid ſtate *(b)*. Theſe mixtures appear to be ſooner reſoluble than either the animal or vegetable matter ſeparately: probably they are eaſier alſo of digeſtion in the ſtomach.

Among the common kinds of grain, rice is accounted the mildeſt and moſt nutritious, and ſuppoſed to be particularly ſerviceable in dyſenteries and diarrhœas. It is leſs viſcous than wheat, or of leſs tenacity when boiled with water. It ſwells to a larger bulk in water than any other grain.

Wheat, whether in the form of flower or of ſtarch, is perhaps the moſt glutinous of all the farinacea. The viſcous ſubſtance which the flower forms with milk, is often a ſalubrious aliment in fluxes and catarrhs. The ſtarch is uſed medicinally for the ſame intentions, in powders, mixtures, and other forms: a dram of ſtarch, with three ounces of any agreeable ſimple water, and a little ſugar, compoſe an elegant gelly, of which a ſpoonful may be taken every hour or two. Theſe gelatinous mixtures are likewiſe an uſeful injection in ſome

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caſeous part of milk; not ſoluble in water or ſpirit; yielding in analyſis no acid, but a volatile alkaline ſpirit and ſalt, and an oil which ſwims.—Starch is the ſame ſubſtance in all vegetables containing it: feculæ of arum root, bryony, iris, dandelion, American manioc or yacca, freed from the poiſonous juice, is an identical matter with ſtarch of wheat.—The glutinous matter is likewiſe the ſame in all vegetables. From juices of herbs, heated, a green fecula ſeparates; from which ſpirit extracts green reſin, of the ſame general properties with other reſins, leaving behind a pure glutinous vegeto-animal ſubſtance. The fecula which ſeparates firſt, or with leaſt heat, is richeſt in tinging reſin; the next, in the glutinous matter. Repeated digeſtion in large quantities of ſpirit is neceſſary for complete ſeparation. *Rouelle, &c. Journ. de Med.* 1773.

(a) Vide Malouin, *Chimie medicinale, part.* iii. *chap.* 2. *tom.* i. *p.* 234.

(b) See Dr. Pringle's experiments on this ſubject, in the appendix to his *obſervations on the diſeaſes of the army.*

diarrhœas, particularly where the lower inteſtines have their natural mucus abraded by the flux, or are conſtantly irritated by the acrimony of the matter.

Oats are reckoned to be leſs viſcous, and leſs nutrimental, than the two preceding.

Barley is leſs nutrimental, leſs glutinous, more cooling, more eaſily reſoluble by fermentation, and probably in the ſtomach alſo, than either of the foregoing. Among the ancients, decoctions of it were the principal medicine, as well as aliment, in acute diſeaſes; and from the common uſe of ſhelled barley, *ptiſana*, in that form, other preparations of this kind, though made with different ingredients, have been often diſtinguiſhed by the ſame name. The barley is freed from the ſhell in mills, and in this ſtate called French or Scotch barley. A ſort of ſhelled barley has been commonly brought from Holland in ſmall round grains, called from their pearly whiteneſs, *hordeum perlatum*, or pearl barley*(a).

Aq. hordeata *Ph. Lond.*

Decoctions of the *farinacea* in water, containing only their lighter and more agreeable parts, are very uſeful diluents in acute and other inflammatory diſeaſes: however trivial preparations of this kind may appear to be, they are often, in theſe caſes, medicines of primary importance. The moſt elegant and grateful beverage is prepared from pearl barley, by waſhing, for example, two ounces of it, from the mealy matter that adheres, with cold water; then boiling it with about half a pint of freſh water, which will acquire ſome tinge, and is to be thrown away; and afterwards putting the barley into two quarts of boiling water, and continuing the coction till one half is waſted.

An infuſion or decoction of well toaſted bread is likewiſe a very agreeable diluent, of the aſtringent kind. In the cholera morbus, or bilious vomitings and purgings, it is often retained by the ſtomach when other liquors and medicines are rejected; and in ſeveral inſtances, by being drank plentifully, has effected a cure.

Bran, conſiſting of the huſks or ſhells of the grain, with a portion of its farinaceous matter, is ſuppoſed to have a laxative and detergent quality.

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*(a) MAIZ, with water forms the moſt gluey viſcid ſubſtance of any of the farinacea. We have never been able to make it undergo ſuch a fermentation as to have the friability of our grains. *Cullen, Mat. Med.*

quality. Decoctions of it ſweetened with ſugar, are uſed by the common people, and ſometimes with good ſucceſs, againſt coughs.

* Wort. Dr. Macbride, in his very ingenious *Experimental Eſſays*, having laid down as a principle, " that the *cure* of the *ſcurvy* depends on the *fermentative quality* in the remedies made uſe of," was led to enquire after a ſubſtance, capable of being preſerved during a long ſea voyage, and yet containing materials by which a fermentation might be occaſionally excited in the bowels. Such an one appeared to him to be found in *malt*, which is well known to be the grain of barley, brought ſuddenly to a germinating ſtate by heat and moiſture, and then dried, whereby its ſaccharine principle is developed, and rendered eaſy of extraction by watery liquors. The ſweet infuſion of this, called *wort*, he propoſed to give as a dietetic article to ſcorbutic perſons, expecting that it would ferment in their bowels, and give out its *fixed air*, by the antiſeptic powers of which the ſtrong tendency to putrefaction in this diſeaſe might be corrected.

It was ſome time before a fair trial of this propoſed remedy could be obtained; and different reports were made concerning it. By ſome caſes, however, publiſhed in a poſtſcript to the ſecond edition of the Doctor's work, in 1767, it appears that ſcorbutic complaints of the moſt dangerous kind have actually been *cured at ſea* by the uſe of wort. Its general effects were to keep the patients open, and to prove highly nutritious and ſtrengthening. It ſometimes purged too much, but this effect was eaſily obviated by the *tinctura thebaica*. Other unqueſtionable caſes of its ſucceſs in this diſeaſe are to be ſeen in Vol. V. of the *London Med. Eſſ. and Inq.*

The uſe of wort has hence been adopted in other caſes where a ſtrong putrid diſpoſition in the fluids appeared to prevail, as in cancerous and phagædenic ulcers; and inſtances are publiſhed in the 4th Vol. of the work above-mentioned of its remarkable good effects in theſe caſes.

As the efficacy of the malt infuſion depends upon its producing changes in the whole maſs of fluids, it is obvious that it muſt be taken in large quantities for a conſiderable length of time; and rather as an article of diet than medicine. From one to four pints daily have generally been directed. The proportion recommended in preparing it, is one meaſure of ground malt to three equal meaſures of boiling water.

The mixture muſt be well ſtirred, and left to ſtand, covered, three or four hours. It ſhould be made freſh every day.

FULIGO.

FULIGO LIGNI Pharm. Lond. & Edinb. WOOD SOOT: the ſmoke of burning wood condenſed into a ſhining black concrete.

WOOD ſoot has a diſagreeable ſmell, and a pungent, bitter, nauſeous taſte: the more reſinous the wood, the bitterer is the ſoot. On a chemical analyſis, it is reſolved into a volatile alkaline ſalt, an empyreumatic oil, a fixt alkali, and an inſipid earth. The volatile ſalt and ſpirit are ſometimes kept in the ſhops, and have in ſome caſes been preferred to thoſe of the animal kingdom.

Wood ſoot is directed in hyſteric caſes, and in different nervous diſorders, as an antiſpaſmodic and corroborant. It is uſed chiefly in the form of a ſpirituous tincture, in conjunction, commonly, with aſafetida or other materials of ſimilar intention: the officinal tincture is drawn from two ounces of ſoot and one of aſafetida, with a quart of proof ſpirit †, or a pint of proof and a pint of rectified ſpirit ‡. The virtues of the ſoot are extracted, almoſt equally, by proof ſpirit, rectified ſpirit, and water; each of which, if the ſoot is of a good kind, diſſolves about one fourth of it. The extracts, obtained by inſpiſſating the filtered ſolutions, are exceſſively bitter: the ſpirituous extract retains moſt perfectly the peculiar flavour of the ſoot.

Tinct. fulig.
†*Ph. Lond.*
‡*Ph. Edinb.*

FUMARIA.

FUMARIA Pharm. Edinb. Fumaria officinarum & dioſcoridis C. B. Fumaria officinalis Linn. FUMITORY: a plant with blueiſh green finely divided leaves; producing, towards the tops of the ſtalks, oppoſite to the leaves, ſpikes of irregular purpliſh flowers followed each by a ſingle ſeed. It is an annual weed in ſhady grounds, and flowers in May and June.

THE leaves of fumitory are very juicy; of a bitter, ſomewhat ſaline taſte; and no remarkable ſmell. The expreſſed juice, and a decoction of the leaves in water, inſpiſſated to the conſiſtence of extracts, are very bitter, and conſiderably ſaline: on ſtanding for ſome time, they throw up to the ſurface copious ſaline efflorefcences, in figure ſomewhat reſembling the cryſtals of nitre, to the taſte bitteriſh and ſlightly pungent. A tincture of the dry leaves in rectified ſpirit yields, on inſpiſſation, an extract, leſs in quantity, and bitterer in taſte, than either the watery extract or inſpiſſated juice: no ſaline matter ſeparated from this extract, nor did it appear to the taſte any other than ſimply bitter.

This herb is recommended as an aperient and reſolvent, in obſtructions of the viſcera, in ſcorbutic and cutaneous maladies: Hoffman has a high opinion of it as a purifier of the blood, and gives it the preference to all the other herbs made uſe of in that intention *(a)*. It appears from the above analyſis to be a plant of no inconſiderable virtue, though at preſent a ſtranger to practice: its ſenſible operation is by looſening the belly and promoting urine.

GALANGA.

GALANGA MINOR Pharm. Edinb. (b) & C. B. Wanhom Kæmpfer amœnitat. exot. GALANGAL or LESSER GALANGAL: the root of a graſſy-leaved plant, *(Kæmpferia Galanga Linn.)* brought from China and the Eaſt Indies, in pieces about an inch long and ſcarce half ſo thick, branched, full of knots and joints with ſeveral circular rings, of a reddiſh brown colour on the outſide and a pale reddiſh within. We ſometimes meet with a larger root of the ſame kind, an inch or more in thickneſs, under the name of *galanga major:* this is to be rejected, as being much weaker, yet more diſagreeable, than the ſmall.

GALANGAL root has an aromatic ſmell, not very grateful; and an unpleaſant, bitteriſh, hot, biting taſte. It was formerly in common uſe as a warm ſtomachic bitter, and generally made an ingredient in bitter infuſions; but is now almoſt wholly laid aſide, on account of its unpleaſant flavour. Nor indeed does bitterneſs appear to be its proper medical character; the heat and pungency greatly prevailing. An extract made from it with rectified ſpirit is exceſſively fiery, ſetting the mouth

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(a) De præſtantia remediorum domeſticorum, §. 19.

(b) Expunged.

as it were in a flame: the watery extract is likewiſe very hot and pungent, though much leſs ſo than the ſpirituous, its quantity being about three times as large: neither one nor the other extract diſcovers any great bitterneſs. In diſtillation with water, there ariſes an eſſential oil, to the quantity of about a dram from ſixteen ounces, of little ſmell, and of no great pungency. The pungent matter of the galangal appears from theſe experiments to be of the ſame nature with that of pepper; reſiding, not in the volatile oil, but in a more fixt matter.

GALBANUM.

GALBANUM Pharm. Lond. & Edinb. GALBANUM: the concrete gummy-reſinous juice of an evergreen umbelliferous plant growing in Ethiopia, *ferula africana galbanifera foliis & facie liguſtici Herman. par. bat. Bubon Galbanum Linn.* It is brought to us in pale coloured, ſemitranſparent, ſoft, tenacious maſſes: the better ſorts of which, on being opened, appear compoſed of clear whitiſh tears, often intermixed with little ſtalks or ſeeds of the plant. By age it grows yellowiſh or brown.

THIS juice has a ſtrong unpleaſant ſmell, and a bitteriſh, warm, ſomewhat biting taſte. In medical virtue, as in its ſenſible qualities, it is ſimilar to ammoniacum; but is generally accounted leſs efficacious in aſthmatic diſorders, and more ſo on account of its ſtronger flavour, in hyſteric caſes.

Galbanum, like the other gummy reſins, unites with water, by trituration, into a milky liquor; but does not perfectly diſſolve, as ſome have reported, in water, vinegar, or wine. Rectified ſpirit takes up much more than either of thoſe menſtrua, but not the whole: the tincture is of a bright golden colour. A mixture of two parts of rectified ſpirit and one of water diſſolves all but the impurities, which are commonly in conſiderable quantity. It is beſt purified by including it in a bladder, and keeping it in boiling water till it melts or becomes ſoft enough to be ſtrained, by preſſure, through a hempen cloth: if this proceſs be ſkilfully managed, the galbanum loſes but little of the eſſential oil, in which great part of its virtue conſiſts, and which appears to be carried off in evaporation both by water and ſpirit. In diſtillation with water, the oil ſeparates and riſes to the ſurface, in colour yellowiſh, in quantity about

Galbanum purificatum *Ph. Lond.*

about one twentieth of the weight of the galbanum: in this reſpect it differs from ammoniacum, which has not been obſerved to yield any eſſential oil. From that and the other common gummy reſins it differs alſo in regard to the appearance of the empyreumatic oil obtained by diſtillation in a retort without addition; the empyreumatic oil of galbanum being, as Neumann obſerves, of a blue colour, which changes in the air to a purple.

GALLÆ.

GALLÆ Pharm. Lond. & Edinb. Galls: hard roundiſh excreſcences, found in the warmer countries, on the oak tree; produced from the puncture of an inſect, and affording a lodgment for its young till they are capable of eating a paſſage through: thoſe galls, which have no hole, are found to have the dead inſect remaining in them. Two ſorts are diſtinguiſhed in the ſhops, one ſaid to be brought from Aleppo, the other from ſome of the ſouthern parts of Europe. The former are generally of a blueiſh colour, or of a greyiſh or blackiſh verging to blueneſs, unequal and warty on the ſurface, hard to break, and of a cloſe compact texture: the others are of a pale browniſh or whitiſh colour, ſmooth, round, eaſily broken, leſs compact, and of a much larger ſize. The two ſorts differ in ſtrength, but in other reſpects appear to be of the ſame quality: the Aleppo or blue galls are the ſtrongeſt, two parts of theſe being equivalent to at leaſt three of the others.

This excreſcence is a ſtrong aſtringent; one of the ſtrongeſt of thoſe of the vegetable kingdom. It has no ſmell, or particular flavour; ſimple aſtringency being its medical character. The cortical hard part of the gall appears conſiderably ſtronger than the interiour more brittle matter. The virtue of both is taken up by watery and by ſpirituous menſtrua: on inſpiſſating the tinctures, both the water and ſpirit riſe unflavoured, leaving extracts of intenſe ſtypticity: the ſpirituous extract is in ſmaller quantity than the watery, and ſomewhat ſtronger in taſte. The galls in ſubſtance have been given in ſmall doſes in different diſorders proceeding from relaxation, and recommended by ſome in intermitting fevers, in doſes of half a dram and a dram; but it is ſurely imprudent to venture on ſuch large quantities, of ſo ſtrong an aſtringent. Among us they are employed chiefly as an external ſtyptic, in embrocations and injections.

GALLIUM.

GALLIUM Pharm. Edinb. (a) *Gallium luteum C. B. Galium verum Linn.* LADIES BEDSTRAW: a plant with ſquare ſtalks, and long narrow ſoft leaves, ſtanding generally eight at a joint in form of a ſtar: on the tops, and on ſhort pedicles iſſuing from among the leaves, grow thick cluſters of ſmall yellow monopetalous bell-ſhaped flowers, divided, each, into four ſegments, and followed by two ſeeds. It is perennial, common in dry waſte grounds, and flowers in June and July.

THE flowers of this plant have a moderately ſtrong, not diſagreeable ſmell; the leaves, little or none. They both diſcover to the taſte a ſenſible acidity; which they manifeſt alſo by changing the juices of blue flowers to a red, and by coagulating boiling milk: they are ſaid to be, in ſome places, commonly made uſe of in this laſt intention, whence one of the common names of the plant, cheeſe-rennet. Their acid matter appears to be, if Borrichius's experiment is to be depended on, of a more ſubtile kind than that of ſorrel, and than the other native vegetable acids that have been examined; the flowery tops, committed to diſtillation as ſoon as gathered, giving over a pretty ſtrong acid liquor, in a moderate heat, wherein ſorrel yielded only an inſipid phlegm (b). The reſtringent and refrigerating virtues, aſcribed to this plant, appear from theſe experiments to have ſome foundation.

GAMBOGIA.

GAMBOGIA Pharm. Lond. & Edinb. Gummi gutta, gamandra, gamma, jemu, &c. Cambogia gutta Linn. GAMBOGE: the concrete gummy-reſinous juice of certain trees growing in Cambogia or Cambodia and ſome other parts of the Eaſt Indies: brought over in large cakes or rolls, externally of a browniſh yellow, internally of a deep reddiſh yellow or orange colour, changing to a pale bright yellow on being moiſtened.

(a) Expunged.

(b) *Acta medica & philoſophica Hafnienſia, vol.* i. *obſ.* 69.

This juice has no ſmell, and when firſt chewed makes but little impreſſion on the organs of taſte: kept in the mouth for ſome time, it diſcovers a conſiderable acrimony. Rectified ſpirit of wine, poured upon it, acquires immediately a deep gold colour, and diſſolves about five parts out of ſix. Water, aſſiſted by heat, takes up nearly as much; but the ſolution is turbid, and depoſites, on cooling, a conſiderable quantity of reſinous matter. Water, impregnated with fixt alkaline ſalt, totally diſſolves it into a tranſparent blood red liquor, which paſſes through a filter without any ſeparation of its parts, and depoſites no ſediment on ſtanding. It is wholly taken up likewiſe, and in conſiderable quantity, by vinous ſpirits impregnated with volatile alkalies, or the dulcified ſpirit of ſal ammoniac: this ſolution mingles uniformly both with water and rectified ſpirit, without precipitation or turbidneſs.

Gamboge is a ſtrong and quick cathartic; producing copious evacuations, and uſually finiſhing its operation ſoon. In ſuch hydropic caſes as require the briſker cathartics, and in other diſorders accompanied with a redundance of ſerous humours, it is an uſeful and ſafe hydragogue: in hot, dry, bilious conſtitutions, it is never to be ventured on: in all caſes, it is liable, on firſt uſing it, to vomit as well as purge. The doſe is from three or four grains to twelve, or at moſt fifteen.

This medicine is moſt diſpoſed to act upwards, when given in the ſolid form of a bolus or pill: by joining to it mercurius dulcis, its emetic power is generally reſtrained. It is principally made uſe of in conjunction with that mercurial preparation and with other purgative materials. Solutions of gamboge in alkalized water, and in dulcified alkaline ſpirits, act only by ſtool and urine, and with much greater mildneſs than the juice in ſubſtance. The watery tincture is ſtill milder, the menſtruum diſſolving only a part of the reſin: the ſpirituous tincture operates with extreme irritation both upwards and downwards.

GENISTA.

GENISTA Pharm. Edinb. Geniſta anguloſa & ſcoparia C. B. Spartium ſcoparium Linn. Broom: a ſhrubby plant; with numerous, ſlender, angular, tough twigs; ſmall, ſomewhat oval leaves, ſet three on one pedicle; and deep yellow papilionaceous flowers, which are followed by broad pods, containing hard browniſh flat ſeeds. It is common on heaths and uncultivated ſandy grounds, and flowers in May and June.

THE leaves and ſtalks of broom have a nauſeous bitter taſte; which they give out, by infuſion, both to water and rectified ſpirit; and which, on gently inſpiſſating the filtered liquors, remains concentrated in the extracts: the watery tincture is of a yellowiſh green or browniſh, the ſpirituous of a dark green colour. They are accounted laxative, aperient, and diuretic; and in this intention have been often uſed by the common people in dropſies and other ſerous diſorders. Dr. Mead relates a caſe of an hydropic perſon, who, after the paracenteſis had been thrice performed, and ſundry purgatives and diuretics had been tried without relief, was perfectly cured, by taking, every morning and evening, half a pint of a decoction of green broom tops with a ſpoonful of whole muſtard ſeed: by this medicine, the thirſt was abated, the belly looſened, and the urinary diſcharge increaſed to the quantity of at leaſt five or ſix pints a day *(a)*.

Infuſions of the aſhes of the plant in acidulous wines have likewiſe been employed in the ſame intention, and often with good ſucceſs. The virtue of this medicine does not depend, as ſome have ſuppoſed, on any of the peculiar qualities of the broom remaining in the aſhes; but on the alkaline ſalt and earth, which are the ſame in the aſhes of broom as in thoſe of other vegetables, combined, wholly or in part, with the vinous acid. A ſolution even of the pure earthy part of vegetable aſhes, made in vegetable acids, proves notably purgative and diuretic.

Of the ſeeds and flowers, the medicinal qualities are not well known. It is ſaid that the ſeeds, in doſes of a dram and a half in ſubſtance, and five or ſix drams in decoction or infuſion, prove purgative or emetic. Some report that the flowers alſo operate in the ſame manner, but Lobel aſſures us, from his own obſervation, that they have been taken in quantity, without producing any ſuch effect; and I have known infuſions of the flowery tops drank freely in ſome aſthmatic caſes, without any other ſenſible operation than a ſalutary increaſe of urine and expectoration. The ſeeds, ſlightly roaſted, are uſed in ſome places as coffee, and ſaid to act as diuretics.

(a) Monita & præcepta medica, p. 138.

GENTIANA.

GENTIANA.

GENTIANA Pharm. Lond. & Edinb. Gentiana major lutea C. B. Gentiana lutea Linn. GENTIAN: a plant with an unbranched jointed ſtalk, and oblong acuminated ribbed leaves ſet in pairs at the joints upon broad pedicles: the flowers, which ſtand in cluſters round the ſtalk in the boſoms of the upper leaves, are of a pale yellow colour, ſomewhat bell-ſhaped, deeply cut into five ſegments, followed by oblong capſules full of ſmall ſeeds: the root is moderately long, ſlender, branched, browniſh on the outſide, of a reddiſh yellow or gold colour within. It is perennial, a native of the mountainous parts of Germany, *&c.* from whence the ſhops are generally ſupplied with the dried roots.

Among the gentian brought to London ſome years ago, a root of a different kind was mixed: the uſe of which occaſioned violent diſorders, and in ſome inſtances, as is ſaid, proved fatal. This root is externally of a paler colour than gentian, and its longitudinal wrinkles finer and cloſer: on cutting the two roots, the difference is more remarkable, the poiſonous root being white, without any degree of the yellow tincture which is deep in gentian; nor is its taſte bitter, like that of gentian, but mucilaginous.

GENTIAN root is a ſtrong flavourleſs bitter; in taſte leſs exceptionable than moſt of the other common ſtrong bitters, and hence among us moſt generally made uſe of. The flavour and aromatic warmth, wanting to render it grateful, and acceptable to the ſtomach, are ſupplied by additions. An ounce of the gentian root, with the ſame quantity of freſh lemon peel, and a dram and a half of dried orange peel, infuſed for an hour or two in three quarters of a pint of boiling water, make a very elegant bitter. The lemon peel is an excellent addition in the watery infuſions, but the periſhableneſs of its flavour excludes it from ſpirituous tinctures deſigned for keeping. The Edinburgh college have directed an addition of ſpirits to their bitter infuſion, which is made of half an ounce of gentian root, one dram of dried orange peel, and half a dram of coriander ſeeds, infuſed in a quarter of a pint of proof ſpirit, and a pint of water. The bitter tinctures are commonly prepared, by macerating an ounce of the root, for ſome days, in a pint of proof ſpirit, with four drams of dried orange peel and two of leſſer cardamom

Infuſ. amar. *Ph. Lond.*

Infuſ. amar. *Ph. Edinb.*

Tinct. amar *Ph. Lond.*

Tinctura amara, *ſive* Elixir ſtomachic. *Ph. Edinb.*

Vinum amar. *Ph. Lond.*

Extractum gentianæ *Ph. L. & Ed.*

cardamom ſeeds; or in a pint and quarter of proof ſpirit, with the above quantity of orange peel, two drams of canella alba, and fifteen grains of cochineal. Wines and malt liquors are likewiſe impregnated with the ſame or ſimilar materials, in different proportions: an ounce of the gentian root, the ſame quantity of freſh lemon peel, and two drams of long pepper, communicate, by maceration without heat, a grateful warmth and bitterneſs to a quart of mountain. The virtue of the root is extracted by all theſe menſtrua, as alſo by rectified ſpirit; not totally, however, by any, in the above proportions; and not in ſo great a degree by water as by ſpirit. The tincture in rectified ſpirit is of an orange yellow colour: inſpiſſated, it yields an intenſely bitter extract, the ſpirit riſing unflavoured. The watery infuſions are of a dark browniſh red; and leave, on being inſpiſſated, an extract, in larger quantity, and leſs bitter, than the other. Theſe extracts are made into pills, by themſelves, or with aromatic additions.

The German ephemerides mention a root brought from America by the Portugueze, under the name of *Indian gentian*; of a pale yellowiſh colour, jointed, marked with various knots and circles like ipecacoanha; of a penetrating aromatic bitterneſs, not ungrateful, though far more intenſe than the bittereſt of the officinal bitter drugs. This root is greatly commended in obſtinate intermittents, and many other diſorders: a ſcruple is ſaid to do more than repeated half drams of bark *(a)*.

*GEOFFRÆA.

GEOFFRÆA Jamaicenſis inermis Dris. Wright. Geoffræa Pharm. Edinb. CABBAGE BARK, or WORM-BARK TREE. This is a tree growing abundantly in the low ſavannahs of Jamaica, of a conſiderable height, but no great thickneſs. It has a ſtraight ſmooth trunk, and ſends off its branches near the top. It bears dark green leaves, and roſe-coloured flowers of the papilionaceous kind, ſet in purple flower-cups. Theſe are ſucceeded by a green hard fruit, of the ſize of a ſmall plumb, having a ſkin the thickneſs of a crown piece, and a nut within.

THE bark of this tree is externally of a grey colour, black and furrowed on the inſide. To the taſte it is mucilaginous and ſweetiſh.

(a) Michael Schendo, *Acta phyſico-medica acad. nat. curioſ. vol.* i. *anno* 1727. *Append. p.* 112.

It ſmells diſagreeably, whence it has been called by ſome the *bulge-water tree.* It has been long a celebrated anthelmintic in the Weſt Indies, and has lately been introduced into European practice.

The firſt account we meet with of its uſe is in a letter from Mr. Duguid, in Vol. II. of *Eſſays Phyſical and Literary.* Several ſubſequent accounts appeared in different numbers of the *Medical Commentaries.* But the fulleſt relation, together with an accurate botanical deſcription of the plant, is given by Dr. William Wright in the *Philoſophical Tranſactions,* Vol. LXXVII. Part II.

The bark is uſed in the ſeveral forms of decoction, ſyrup, powder, and extract. For making the decoction, an ounce of freſh-dried bark is to be boiled ſlowly in a quart of water, till the liquor be of the colour of Madeira wine. This is to be ſtrained off for uſe. The ſyrup is made by adding a ſufficient quantity of ſugar to this decoction. By evaporating the decoction, the extract is formed, which muſt be carefully ſtirred during the proceſs, to prevent the reſinous part from riſing to the top. The decoction is generally preferred in Jamaica, and ſeems to be the moſt efficacious as an anthelmintic.

As this medicine is rather a violent one, it ſhould always be exhibited at firſt in ſmall doſes. The moſt immediate effect of theſe is to produce nauſea, which is ſucceeded by briſk purging, eſpecially when the powder is given. If cold water is drank during its operation, it is apt to occaſion ſickneſs, vomiting, fever, and delirium. Theſe ſymptoms, whether occaſioned by this cauſe, or by an over doſe, are removed by waſhing the ſtomach with warm water, purging with caſtor oil, and giving plenty of drink acidulated with vegetable acid, which laſt ſeems a kind of ſpecific againſt its deleterious effects. The manner in which Mr. Anderſon, the writer of a paper concerning it in Vol. IV. of the *Medical Commentaries,* recommends its exhibition, is to give gradually augmented doſes of the decoction for eight or nine mornings ſucceſſively, and then a doſe of jalap and calomel, which ſeldom fails to bring away the worms, ſome dead, and ſome alive. This writer alſo remarks, that there are two kinds of the bark, one much paler than the other, which acts with greater violence.

GERANIUM.

GERANIUM Pharm. Pariſ. CRANESBILL: a plant, ſo called from the remarkable long beak of its ſeed-veſſel, which conſiſts of five capſules opening inwards, and containing each a ſingle ſeed: the flowers are pentapetalous.

1. GERANIUM SANGUINARIUM *ſeu hæmatodes. Geranium ſanguineum maximo flore C. B. Geranium ſanguineum Linn.* Bloody craneſbill: with ſolitary flowers, on their firſt appearance red, but ſoon changing to a blueiſh; the leaves roundiſh, but divided almoſt to the pedicle into five ſegments, which are often ſubdivided at the extremities into three.

2. GERANIUM COLUMBINUM *ſive Pes columbinus. Geranium folio malvæ rotundo C. B. Geranium rotundifolium Linn.* Dovesfoot: with purple flowers ſtanding two on one pedicle; and mallow-ſhaped leaves on long footſtalks.

3. GERANIUM BATRACHIOIDES *ſive Batrachium. Geranium batrachioides gratia dei germanorum C. B. Geranium pratenſe Linn.* Crowfoot craneſbill: with two blue (ſometimes white) flowers on one pedicle: and large wrinkled leaves, divided into five or ſeven ſegments, which are again deeply cut on the edges.

4. HERBA ROBERTI *ſive Gratia dei. Geranium robertianum C. B. & Linn.* Herb-robert: with two reddiſh or purpliſh flowers on one pedicle; the leaves divided quite to the footſtalk into three ſegments; and theſe again deeply cut.

5. GERANIUM MOSCHATUM *ſive Acus moſchata. Geranium cicutæ folio moſchatum C. B. Geranium moſchatum Linn.* Muſk craneſbill: with a number of red flowers on one pedicle; and oval indented leaves, ſet in pairs along a middle rib, which is terminated by an odd one.

All theſe plants are found wild in different parts of this kingdom: the four firſt are common, the laſt rare. They flower in May, June, and July; the fourth earlieſt, the firſt lateſt. The ſecond and fifth are annual, the fourth biennial, the others perennial.

The above geraniums, formerly ranked among the officinals, and many other plants of the ſame genus, indigenous or commonly cultivated; diſcover to the taſte a conſiderable aſtringency, and ſtrike an inky blackneſs with ſolution of chalybeate vitriol: ſome of them are, apparently, of the ſtronger kind of vegetable ſtyptics. The three firſt ſorts have no great ſmell; the fourth, an unpleaſant one, ſomewhat like that of the dead nettle, but ſtronger; the fifth has an agreeable muſky ſcent, which is deſtroyed by bruiſing the plant. The odoriferous principle is ſeparated by diſtillation with water, and gives a moderate impregnation to the diſtilled fluid; but no eſſential oil was obtained on ſubmitting to the operation moderate quantities either of the fetid or the muſky ſorts. The ſtyptic matter is extracted both by water and rectified ſpirit; and on evaporating the filtered liquors, remains entire in the inſpiſſated extracts: the watery infuſions are yellowiſh or browniſh, the ſpirituous tinctures of a deep green colour. The watery extracts, thoſe at leaſt of the ſecond and fourth kinds, on ſtanding for ſome weeks, throw off to the ſurface a conſiderable quantity of ſmall ſaline cryſtals, in ſhape ſomewhat like thoſe of nitre, in taſte auſtere and bitteriſh. From theſe experiments it may be preſumed, that the geraniums have no ill claim to the vulnerary, that is, aſtringent virtues, commonly aſcribed to them, as in alvine fluxes, hemorrhagies, defluxions on the breaſt, *&c.* *(a)

GINSENG.

GINSENG Pharm. Edinb. Aureliana canadenſis, ſinenſibus ginſ-eng, iroquæis garent-oguen, Lafiteau memoir. ſur le ginſ. Panax quinquefolium Linn. GINSENG: the root of a ſmall plant; growing in China, Tartary, and likewiſe in ſome parts of North America, particularly Canada and Penſylvania, from whence conſiderable quantities have lately been brought over. It is two or three inches in length; taper; about

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*(a) Our hoſt at Carliſle told us that he uſed to be troubled with the ſtone, and the beſt remedy he ever had experience of to give him eaſe was the decoction of geranium robertianum. *Ray's remains,* publiſhed by *Scott,* 1760.

the thickneſs of the little finger, or leſs, in the thickeſt part; often forked at bottom; elegantly ſtriated with circular wrinkles; of a browniſh or yellowiſh colour on the outſide, and whitiſh or of a pale yellowiſh within: on the top are commonly one or more little knots or tubercles, which are the remains of the ſtalks of preceding years, and from the number of which, the age of the root is accordingly judged of.

On comparing the American roots with ſome ſpecimens received from Nankin, no material difference could be obſerved between them, either in their external appearance or in their quality; except that the Chineſe were in general ſomewhat paler coloured on the outſide, and internally rather whiter. It is ſaid that in China, the roots, taken up in ſpring or autumn and carefully cleaned from the fibres, are waſhed and ſoaked for a time in a decoction of rice or millet-ſeed, and afterwards expoſed to the ſteam of the liquor; that by this means they acquire a greater firmneſs and clearneſs than they have in their natural ſtate; that nevertheleſs the American roots were received and purchaſed as true ginſeng in China itſelf, though without the ſuppoſed advantage of the Chineſe preparation.

Ninzin or *Nindſin* has been commonly ſuppoſed a name ſynonymous to ginſeng. It appears from later obſervations, that the ninzin is the root of a different plant *(a)* which is cured in the ſame manner, and very nearly reſembles the ginſeng, but is ſuppoſed to be of weaker virtue. This alſo is a native of America as well as China. It is called by Kæmpfer, *ſiſarum montanum coræenſe, radice non tuberoſo*; by Linnæus, *ſium foliis ſerratis pinnatis ramis ternatis.*

GINSENG root, a medicine of extraordinary eſteem among the Chineſe as a general reſtorative and corroborant, though undoubtedly very far unequal to the character that has been commonly given of it, promiſes nevertheleſs, from its ſenſible qualities, to be an uſeful addition to the officinal drugs. To the taſte it diſcovers a mucilaginous ſweetneſs, approaching to that of liquorice, accompanied with ſome degree of bitteriſhneſs, and a ſlight aromatic warmth; with little or no ſmell. It is far ſweeter, and of a more grateful kind, than the roots of fennel, to which it has by ſome been ſuppoſed ſimilar; and differs likewiſe

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(a) See Juſſieu's paper on this ſubject in Geoffroy's *tract. de mat. med.* ii. 112.

remarkably from thoſe roots, in the nature and pharmaceutic properties of its active principles; the ſweet matter of the ginſeng being preſerved entire in the watery as well as in the ſpirituous extract, whereas that of fennel roots is deſtroyed or diſſipated in the inſpiſſation of the watery tincture. The ſlight aromatic impregnation of the ginſeng is likewiſe in good meaſure retained in the watery extract, and perfectly in the ſpirituous; which laſt is a very pleaſant, bitteriſh, warm ſweet.

GLYCYRRHIZA.

GLYCYRRHIZA Pharm. Lond. & Edinb. Glycyrrhiza ſiliquoſa vel germanica C. B. Glycyrrhiza glabra Linn. LIQUORICE: a plant with oval leaves, ſet in pairs along a middle rib; and ſmall blueiſh papilionaceous flowers, ſtanding in ſpikes, on naked pedicles, at the junctures of the ribs of the upper leaves with the ſtalk: the flower is followed by a ſmooth pod containing flat kidney-ſhaped ſeeds: the root is very long, ſlender, flexible, of a browniſh colour on the outſide and yellow within. It is perennial, a native of the ſouthern parts of Europe, and plentifully cultivated in England: the roots are fit for being taken up in the third year after the ſlips or offſets have been planted. The liquorice root of our own growth is nowiſe inferiour to that which is produced in its native climate. The root carefully dried and powdered, is of a richer and more agreeable taſte than when freſh, and of a dull yellow colour with a caſt of brown: the liquorice powder commonly ſold is of a weaker taſte, and a paler and bright yellow colour, from an admixture probably of other ſubſtances.

LIQUORICE, one of the principal ſweets, is almoſt the only one of the common ſubſtances of that claſs which tends to abate thirſt: this property was known to the Greeks, who hence diſtinguiſhed it by the name *adipſon*, and employed it, as Galen obſerves, in hydropic caſes, for alleviating the deſire of drinking. It is an uſeful emollient and incraſſant in defluxions on the breaſt, and ſuppoſed to prove at the ſame time gently detergent. Infuſions and extracts, made from it, afford likewiſe very commodious vehicles or intermedia for the exhibition of other medicines: the liquorice taſte concealing that of unpalatable drugs more effectually than ſyrups or any of the ſweets of the ſaccharine kind. It differs alſo from the ſweets of the ſaccharine or honey kind, from the ſweet juices of fruits, and from the ſweet matter afforded by the common ſorts of grain when beginning to vegetate; in being far leſs diſpoſed to run into a fermentative ſtate. The cortical part of the root is conſiderably ſweeter than the more compact internal ſubſtance, but the ſweet matter appears to be in both of the ſame kind.

Extractum glycyrrhizæ *Ph. Lond.*

Liquorice root, lightly boiled in a little water, gives out nearly all its ſweetneſs: the decoction, preſſed through a ſtrainer, and, after ſettling, carefully inſpiſſated, with a gentle heat, till the matter will no longer ſtick to the fingers, affords an extract exceedingly ſweet, more agreeable than that brought from abroad or prepared among ourſelves in the way of buſineſs, of a pleaſant ſmell, of a dark reddiſh brown colour in the maſs, and when drawn out into ſtrings, of a golden colour: its quantity amounts to near half the weight of the root. If the liquorice be long boiled, its ſweetneſs is greatly impaired, and the preparation contracts an ungrateful bitterneſs *(a)*.

Rectified ſpirit takes up the ſweet matter of the liquorice equally with water; and as it diſſolves much leſs of the inſipid mucilaginous ſubſtance of the root, the ſpirituous tinctures and extracts are proportionably ſweeter than the watery: they are accompanied alſo with a ſlight, but very ſenſible, pungency. The quantity of ſpirituous extract amounts only to about one half of the aqueous; and rectified ſpirit, digeſted on the aqueous extract, diſſolves about one half of it, taking up nearly the whole of its ſweetneſs.

GRAMEN.

GRAMEN CANINUM Ph. Lond. Gramen caninum arvenſe ſeu gramen dioſcoridis C. B. Triticum repens Linn. DOGS GRASS, COUCH: a creeping graſs, of a whitiſh green colour, with knotty ſtalks, bearing a ſpike of imperfect flowers ſomewhat reſembling a wheat ear: the roots are whitiſh or pale yellowiſh, long, ſlender, jointed at diſtances, variouſly bent and interwoven. It is a perennial weed.

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*(a) The extract from the firſt infuſion is bronze yellow, exceedingly ſweet, without any acrid or bitter reliſh: — from a ſecond infuſion, much deeper coloured, and far leſs agreeable: — afterwards, by coction, a black acrid extract is obtained, in which the taſte of the liquorice can hardly be perceived. *Beaumé.*

The roots of this plant, to the taſte agreeably ſweetiſh, are recommended as mild aperients in obſtructions of the viſcera. Boerhaave directs the expreſſed juice to be taken, in this intention, to the quantity of ſome pints a day; and obſerves, that cattle are generally found to have indurated livers in the winter, but that from freſh graſs in the ſpring a diarrhœa enſues, and the obſtruction is reſolved.

GRANA PARADISI.

GRANA PARADISI Pharm. Edinb.(a) *Cardamomum majus ſeu grana paradiſi Pharm. Pariſ. Meleguetta & maniguetta & cardamomum piperatum quibuſdam. Amomum Grana Paradiſi Linn.* GRAINS OF PARADISE, called by ſome GREATER CARDAMOMS: angular reddiſh brown ſeeds, ſmaller than pepper, in appearance much reſembling cardamom ſeeds, brought from the Eaſt Indies. The grains of paradiſe and cardamom plants belong both to one botanic genus, the *amomum* of Linnæus.

In pharmaceutical properties, the grains of paradiſe differ greatly from cardamom ſeeds, and greatly reſemble pepper. They have ſomewhat of the flavour of the former, joined to the heat and pungency of the latter; which pungency reſides, not like that of cardamoms in the volatile parts or eſſential oil, but like that of pepper in the reſinous or more fixt matter. The diſtilled oil of grains of paradiſe, in ſmell ſufficiently agreeable, is in taſte of the milder kind: the remaining decoction, inſpiſſated, yields an extract of conſiderable pungency: an extract made by rectified ſpirit is highly fiery. This ſpice is employed in ſome places for the ſame purpoſes as pepper; among us it is rarely directed for medicinal purpoſes.

GRANATA.

GRANATA malus Ph. Edinb. Malus punica ſativa C. B. Punica granatum Linn. POMEGRANATE: a prickly tree or ſhrub; with long narrow leaves; deep red pentapetalous flowers ſet in bell-ſhaped cups of the ſame colour; producing fruit about the ſize of an orange, which conſiſts of a thick tough rind, externally browniſh and internally yellow, with a juicy pulp and numerous ſeeds in cells like a honeycomb. It is a native of the ſouthern parts of Europe, and rarely brings its fruit to full perfection in this climate.

(a) Expunged.

The flowers of this tree are mild aſtringents, ſimilar to thoſe of the wild pomegranate or balauſtine, which laſt are preferred only on account of their being larger. The pulp of the fruit, when in perfection, is of a grateful ſubacid ſweet taſte, and of the ſame general qualities with the other ſummer fruits. The rind of the fruit is moderately aſtringent, and in this intention is now and then directed, under the names of *cortex granati* †, *malicorium*, *pſidium*, and *ſidium*: it yields with water near half its own weight of a very auſtere extract, but gives out very little to rectified ſpirit, its aſtringent matter, like that of the fruit of the acacia tree, ſeeming to be indiſſoluble in ſpirituous menſtrua: in this reſpect the aſtringency of the fruit differs from that of the balauſtine or flower of the tree.

† *Ph. Lond. & Edinb.*

GRATIOLA.

GRATIOLA Ph. Edinb. Gratiola centaurioides C. B. Gratia dei. Gratiola officinalis Linn. Hedge hyssop: a low plant, with oblong finely ſerrated leaves ſet in pairs on the ſtalks without pedicles: in their boſoms come forth ſolitary, whitiſh, tubulous, irregular flowers, followed by roundiſh pointed capſules full of ſmall ſeeds: the root is ſlender, whitiſh, jointed, ſurrounded with fibres. It is perennial, a native of the ſouthern parts of Europe, and raiſed in ſome of our gardens.

The leaves of gratiola have a nauſeous bitter taſte, and no remarkable ſmell. They are ſaid to be a ſtrong hydragogue purgative; to operate upwards as well as downwards; and in weak conſtitutions, to occaſion oftentimes violent gripes or ſuperpurgations. Geoffroy obſerves, that the doſe is an infuſion of half a handful of the freſh, or a dram of the dry herb, in wine or water; that a ſlight decoction of it in milk operates far more mildly; and that an extract made with wine may be given to half a dram or two ſcruples. The roots are leſs ungrateful in taſte, and leſs violent in operation, than the leaves: given in ſubſtance, from a ſcruple to a dram, they are ſaid to vomit and purge, without much inconvenience: in ſome parts of Germany, they are reported(*a*) to be commonly employed in dyſenteries, as ipecacoanha among us.

*In a diſſertation on the medical virtues of this plant, publiſhed at Vienna by a Poliſh phyſician, Jac. Koſtrzewſki, ſeveral caſes are related of its efficacy in maniacal diſorders; and alſo in the venereal diſeaſe, accompanied with ulcerations, in tumours, and fluor albus. In mania, the powder of the root to the quantity of half a dram was given, which conſtantly excited vomiting, purging, and a copious flow of urine. In the other caſes, pills were exhibited, compoſed of an extract of gratiola, with ſugar and abſorbent and aromatic powders. This preparation excited a nauſea, but did not vomit. In one venereal caſe a ſalivation was induced by its uſe. On the whole, the author recommends the gratiola as a moſt effectual remedy in all diſorders proceeding from a ſuperabundance of ſerum.

GUAIACUM.

GUAIACUM Pharm. Lond. & Edinb. Guaiacum americanum primum fructu aceris ſive legitimum Breyn. prodr. Guaiacum officinale Linn. GUAIACUM: a large tree, with roundiſh box-like winged leaves, pentapetalous blue flowers in cluſters, and a maple-like heart-ſhaped fruit including a ſingle ſeed(*b*), a native of Jamaica, Hiſpaniola, and other warm parts of America; from whence the wood with its bark, and a concrete reſinous juice exuding from inciſions made in the trunk, are brought to us. The wood is called by ſome *lignum vitæ* and *ſanctum*.

THE WOOD is very hard, compact, and ſo heavy as to ſink in water: the outer part is of a pale yellowiſh colour, the heart of a dark blackiſh brown with a greater or leſs admixture of green. It ſcarcely diſcovers any ſmell, unleſs heated, or while raſping; in which circumſtances it yields a light aromatic one: chewed, it impreſſes a mild acrimony, biting the palate and fauces. Its pungency reſides in a reſinous matter,

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(*a*) Kramer, *Tentamen botanicum emendat. & auct. Introduct. p.* 18.

(*b*) Sloane, *Catalogus plantarum in inſula Jamaica, p.* 186. *Voyage to Jamaica, vol.* ii. *p.* 133.

which is totally extracted by digeſtion in rectified ſpirit, and partially by boiling in water: the ſpirituous tinctures are of a deep browniſh red colour, the watery decoctions of a dark yellowiſh brown. On inſpiſſating the liquors, nothing of the pungency of the guaiacum exhales or diſtils with either menſtruum: the ſpirituous extract, nevertheleſs, diſcovers but little of the pungent taſte which prevailed in the tincture, proving a tenacious almoſt pure reſin, not diſſoluble in the mouth or miſcible with the ſaliva: the watery extract, which contains likewiſe no ſmall proportion of reſinous matter, diſſolves ſlowly, and then manifeſts a notable degree of pungency. During the inſpiſſation of the watery decoction, the reſinous part is apt to ſeparate and ſubſide, unleſs a little ſpirit be added towards the end of the proceſs to keep it united with the gummy: this extract is kept in the ſhops in a ſoft and a hard form; the firſt of a proper conſiſtence for making into pills, the latter for being reduced into powder. The quantity of ſolid extract obtained by rectified ſpirit amounts to about one fourth the weight of the wood; with water ſcarcely one ſixth is obtained. After a pound of the ſhavings of the wood has been boiled in a gallon of water till half the liquor is waſted, and the coction ſucceſſively repeated with five or ſix freſh gallons of water, a conſiderable portion of reſin may ſtill be extracted by moderate digeſtion in rectified ſpirit.

Extractum ligni guaiaci molle & durum *Ph. Lon.*

The BARK of guaiacum is conſiderably leſs hard, but not much lighter, than the wood: it is thin, ſmooth, compoſed as it were of a number of fine plates joined cloſely together, externally of a blackiſh grey colour variegated for the moſt part with greeniſh or livid ſpecks, internally of a whitiſh or pale yellow. In taſte and ſmell, it is ſimilar to the wood, but weaker: the watery and ſpirituous extracts are of the ſame quality, but in leſs quantity.

The reſin, or GUM, ſo called, is brought over in irregular maſſes, uſually friable, of a duſky greeniſh, and ſometimes of a reddiſh hue; intermixed with ſmall pieces of the wood; of a pungent taſte, but of little or no ſmell, unleſs heated. It contains more reſin than the watery extract made from the wood; and more gummy matter than the ſpirituous extract. The reſin, which is the only active part, is obtained pure both from the gummy ſubſtance and from the woody and other indiſſoluble impurities, by digeſting the compound in rectified ſpirit, drawing off the ſpirit from the filtered ſolution till the matter begins to grow thick, and then adding a quantity of water, which will precipitate the pure reſin, and keep diſſolved ſuch of the gummy parts as the ſpirit may have taken up. The quantity of reſin, thus obtained, amounts commonly to about three fourths of the weight of the gum guaiacum.

Guaiacum was firſt received in Europe as a remedy for the venereal diſeaſe; and is ſaid, in the warmer climates, to have been ſometimes ſufficient for ſubduing it. Though of itſelf greatly unequal among us to that diſtemper, it is a good aſſiſtant to mercurial alteratives, and a medicine of great uſe alſo in ſeveral other caſes. To warm and ſtimulate the habit, to promote the excretions made from the blood, as perſpiration and urine, and likewiſe the groſſer evacuations from the inteſtinal canal, appear to be its primary virtues: in large doſes, it operates as a purgative. Where the excretory glands are obſtructed, the veſſels lax and flaccid, and the habit replete with impure ſerous humours; in ſundry cutaneous and catarrhous diſorders, ſome female weakneſſes, and chronical rheumatiſms; it frequently has good effects. In thin emaciated habits and an acrimonious ſtate of the fluids, it often does harm: in ſuch caſes, it has converted a ſimple itching of the ſkin to ill-conditioned eruptions, or increaſed the itching to an almoſt inſupportable degree: where this happens, nitre, whey, ſaline laxatives, and warm bathing, are commonly found moſt effectual for abating the complaints. Hoffman obſerves that it is, in general, leſs proper in an advanced age than in other circumſtances.

A decoction of half an ounce of the wood or bark may be taken in a day, at proper intervals, the patient keeping warm to promote a diaphoreſis. The gum, or extracts made from the wood, are given from a few grains to a ſcruple or half a dram, and ſometimes two ſcruples; which laſt doſe proves, for the moſt part, conſiderably purgative. The extract is recommended by Hoffman as an excellent errhine, which occaſions a great diſcharge from the noſe, and which he ſuppoſes, beſides its ſtimulating power, to be endued with a corroborating one, very friendly to the nervous parts.

Solutions or tinctures of the gum guaiacum are made in the ſhops, both with rectified ſpirit of wine, and with the dulcified aromatiſed volatile alkaline ſpirits, vulgarly called ſal volatile, which in many caſes promote its virtues. To ſix ounces of the gum guaiacum are directed, by the

Tinct. guaiacina volatilis *Ph. Lon.*

the London college, two pints and a quarter of the volatile ſpirit, and for a more ſaturated ſolution, one pint and a half of rectified ſpirit of wine, with the addition of a dram and a half of balſam of Peru. The Edinburgh college directs, for the volatile tincture, four ounces of the guaiacum, with two drams of balſam of Peru, and half a dram of eſſential oil of ſaſſafras, to be diſſolved in a pound and a half of dulcified ſpirit of ſal ammoniac; and for the ſpirituous ſolution, one pound of gum guaiacum and three drams of balſam of Peru, with two pounds and a half of rectified ſpirit. All theſe are ſufficiently elegant ſolutions of the guaiacum, and the additional articles coincide with its virtue: they may be given from twenty drops to a tea-ſpoonful or more in any convenient vehicle. The gum, or reſinous extracts, may be diſſolved alſo, by the mediation of thick mucilages, in watery liquors; and in this form are more commodiouſly taken than in ſpirituous ſolutions, the mucilage in great meaſure covering the pungency of the guaiacum: the mucilaginous ſolution, at firſt greyiſh or browniſh, changes in a few hours to a fine blue or blueiſh green colour.

Balſamum guaiac. *Ph. Lond.*

Elixir guaiacin. volat. *Ph. Edinb.*

Elixir guaiacin. *Ph. Ed.*

GUMMI.

GUM: a concrete vegetable juice; of no particular ſmell or taſte; becoming viſcous and tenacious when moiſtened with water; totally diſſolving in water into a liquid more or leſs glutinous in proportion to the quantity of the gum; not diſſolving in vinous ſpirits or in oils; burning in the fire to a black coal, without melting or catching flame; ſuffering no diſſipation in the heat of boiling water.

1. GUMMI ARABICUM *Pharm. Lond. & Edinb. Gummi acanthinum & thebaicum quibuſdam.* Gum-arabic: the gum, exuding from the Egyptian *acacia* tree, *(Mimoſa milotica Linn.)* whoſe fruit affords the inſpiſſated juice of that name; brought to us from Turkey in ſmall irregular maſſes, of a clear whitiſh or very pale yellowiſh colour.

The medical character of gum-arabic is its glutinous quality; in conſequence of which, it ſerves to incraſſate and obtund acrimonious thin humours, in tickling coughs, alvine fluxes, and other like diſorders: Proſper Alpinus ſays, it is often uſed ſucceſsfully by the Egyptians for reſtraining hemorrhagies. It is given chiefly in the form of powder, from a ſcruple to a dram or two; and ſometimes diſſolved in water, in ſuch proportion as not to make the liquor diſagreeably ſlimy. An ounce renders a pint of water conſiderably glutinous: four ounces give a thick ſyrupy conſiſtence. The ſolutions mingle equally with vegetable and with mineral acids, and with neutral ſaline mixtures; but on the addition of alkalies, fixt or volatile, the liquor grows turbid, and the diſſolved gum ſeparates.

Though the gum in its dry ſtate is not affected by oily liquids, yet when ſoftened with water into the conſiſtence of a thick mucilage, it unites, by trituration, both with the fluid oils and the thicker balſams, ſo intimately, that the whole compound diſſolves in water, without ſeparation, into an emulſion or milky liquor; one part of gum-arabic, ſoftened with an equal weight of water, is ſufficient for rendering four parts or more of oil or balſam diſſoluble *(a)*. The ſolid reſins may in like manner be reduced into emulſions, by grinding them thoroughly with powdered gum, and adding the water by degrees. By theſe means, all reſinous and oily bodies may be diſſolved in watery liquors, and thus excellently fitted for being taken in a liquid form, without any alteration in their ſmell, taſte, or virtue. Theſe emulſions, like the ſolutions of the gum itſelf, mingle uniformly with acids and neutral ſalts; but on the mixture of any alkali, they ſuffer immediately a ſeparation of their parts.

2. GUMMI SENEGALENSE *Pharm. Pariſ. Gummi ſenega vel ſenica.* Gum-ſenegal or ſenica: a gum brought from the iſland Senegal on the coaſt of Africa, ſaid to be the produce of a tree of the ſame genus with that which affords the gum-arabic, *acacia ſiliquis compreſſis Pharm. Pariſ. Mimoſa ſenegal Linn.* Greateſt part of this gum is in larger and darker coloured maſſes than the arabic, and not ſmooth like it, but rough on the outſide. In quality, the two ſorts are ſcarcely different from one another, or from that which exudes from plum, cherry, and other trees among ourſelves: in the ſhops, the clearer pieces of the gum-ſenegal generally ſupply the place of the more coſtly gum-arabic. It is ſuppoſed that the Senegal gum is the ſtrongeſt and moſt ſubſtantial, and the Arabic the pureſt and fineſt.

(a) See on this ſubject the *medical obſervations and enquiries publiſhed by a ſociety of phyſicians in London, vol.* i. *art.* 28. *p.* 358.

3. Tragacantha *Ph. Lond.* *Gummi tragacantha Ph. Edinb.* *Gummi tragacanthæ & dragacanthæ.* Gum-tragacanth or dragant: the gum exuding from a prickly buſh of the ſame name, (*tragacantha C. B.* goats thorn; *tragacantha cretica incana flore parvo lineis purpureis ſtriato Tour. Aſtragalus Tragacantha Linn.*) which grows wild in the warmer climates, and endures the cold of our own, but does not here yield any gum. This commodity is brought chiefly from Turkey, in irregular lumps, or long vermicular pieces bent into a variety of ſhapes: the beſt ſort is white, ſemitranſparent, dry, yet ſomewhat ſoft to the touch.

Gum-tragacanth differs from all the other known gums, in giving a thick conſiſtence to a much larger quantity of water; and in being much more difficultly diſſoluble, or rather diſſolving only imperfectly. Put into water, it ſlowly imbibes a great quantity of the liquid, ſwells into a large volume, and forms a ſoft but not fluid mucilage: if more water be added, a fluid ſolution may be obtained by agitation, but the liquor looks turbid and wheyiſh, and on ſtanding the mucilage ſubſides, the limpid water on the ſurface retaining little of the gum. Nor does the admixture of the preceding more ſoluble gums promote its union with the water, or render its diſſolution more durable: when gum-tragacanth and gum-arabic are diſſolved together in water, the tragacanth ſeems to ſeparate from the mixture more ſpeedily than when diſſolved by itſelf.

Tragacanth is uſually preferred to the other gums for making up troches, and other like purpoſes, and is ſuppoſed likewiſe to be the moſt effectual as a medicine; but on account of its imperfect ſolubility is unfit for liquid forms. It is commonly given in powder with the addition of other materials of ſimilar intention: thus to three parts of gum-tragacanth, are added three of gum-arabic, three of marſhmallow root, one of liquorice, one of ſtarch, and ſix of ſugar. Pulv. e trag. comp. *Ph. L.*

HÆMATITES.

HÆMATITES LAPIS Pharm. Lond. Blood-stone: an elegant iron ore, found either along with the other ores of that metal, or in diſtinct mines by itſelf; in irregular maſſes, convex on one ſide and angular on the other, generally of a dark reddiſh colour with more or leſs of a yellowiſh caſt, very heavy, and of great hardneſs. Broken longitudinally, it exhibits a number of ſtriæ converging to the ſmaller end: the tranſverſe fracture appears of a granulated texture. Expoſed to a moderately ſtrong fire, it falls by degrees into ſcales; and in this ſtate is attracted by the magnet, and gives out its iron to acids, both which have little action upon it in the maſs or when barely reduced to powder.

Hæmat. lap. præparatus *Pharm. Lond.*

THIS mineral, finely levigated, and freed from the groſſer parts by waſhing over with water, has long been recommended in hemorrhagies, fluxes, uterine obſtructions, *&c.* in doſes of from one ſcruple to three or four. We preſume, that it is not expected to act any otherwiſe than by virtue of its ferrugineous matter; and that pure iron itſelf, or its preparations, are preferable to a ſtony ore of variable and uncertain contents.

HEDERA

HEDERA ARBOREA Pharm. Edinb.(a) *& C. B. Hedera communis major J. B. Hedera Helix Linn.* IVY: an evergreen plant, climbing and ſpreading on trees and old walls; with numerous ſlender twigs, and angular leaves. When grown old, the angles of the leaves diſappear, the plant becomes erect, produces flowers, ſmall and herbaceous, in autumn, and cluſters of black berries in winter.

THE leaves of ivy have a very nauſeous taſte, and little or no ſmell. Haller ſays, they are commended in Germany againſt the atrophy of children. Among us they are ſometimes applied externally by the common people to running ſores, and for keeping iſſues open.

The berries were ſuppoſed by the ancients to have a purgative and emetic quality; and an extract made from them by water is called by Quercetanus *extractum purgans.* Later writers have recommended them in ſmall doſes, as alexipharmac and ſudorific: it is ſaid, that in the London plague, the powder of them was given in vinegar or white wine with good ſucceſs. It is probable, however, that the virtue of this compound was rather owing to the vehicle than to the ivy-berries.

(a) Expunged.

From the ſtalks of this plant exudes, in the eaſtern countries, and ſometimes in our own(a), a reſinous juice, which has been directed as an officinal, under the name of *gummi hederæ*. This is in hard compact maſſes, externally of a reddiſh brown colour, internally of a bright browniſh yellow with reddiſh ſpecks or veins, of a vitreous gloſſineſs, but not pellucid, of a light agreeable ſmell when rubbed or heated, and a reſinous ſubaſtringent taſte. Rectified ſpirit receives from it a deep browniſh red tincture, and diſſolves near three fourths: near one fourth remains undiſſolved after the ſucceſſive action of water and ſpirit. It has been recommended as corroborant, and reſolvent, in cachexies, and uterine obſtructions; but has rarely been otherwiſe made uſe of than as an ingredient in plaſters: nor does it appear to have any virtues that common reſin does not poſſeſs in at leaſt an equal degree.

HEDERA TERRESTRIS.

HEDERA TERRESTRIS Pharm. Lond. & Edinb. Hedera terreſtris vulgaris C. B. Corona terræ Lobel. Chamæciſſus; Chamæclema. Glechoma hederacea Linn. GROUND-IVY: a low, ſomewhat hairy, creeping plant: with ſquare ſtalks; roundiſh or kidney-ſhaped leaves ſet in pairs at the joints; in the boſoms of which come forth cluſters of blue labiated flowers, whoſe upper lip is cloven and turned backwards. It is common in hedges and ſhady places, flowers from April to near the end of ſummer, and is generally found green all the winter.

THIS herb has a quick, bitteriſh, warm taſte; and an aromatic but not very agreeable ſmell, which is in great meaſure diſſipated by drying. It is ſuppoſed to be particularly ſerviceable in diſorders of the breaſt, for cleanſing and healing ulcerations in general, reſolving coagulated juices, and purifying the blood. It has been cuſtomary to macerate the herb for a diet drink, in malt liquors; to which it readily communicates its virtue, and which it remarkably helps to fine down. It gives out its virtues alſo, together with a yellowiſh brown tincture, by infuſion in water: on inſpiſſating the filtered liquor, only the unpleaſant ſmell of the herb exhales, its more valuable parts remaining concentrated in the extract; which, on being taſted, impreſſes firſt a kind of ſweetneſs, then a degree of bitterneſs, and ſoon after diſcovers a ſtrong pungency. To rectified ſpirit of wine it yields its virtue only in part: the deep green ſpirituous tincture has but little of the ſubtile pungency of the watery infuſion; and the browniſh yellow extract, obtained by inſpiſſating the tincture, is much weaker in taſte, as well as leſs in quantity, than the extract made with water.

(a) Ray, *Hiſtoria plantarum, tom.* ii. *p.* 1506.

HELLEBORUS ALBUS.

HELLEBORUS ALBUS Pharm. Lond. Veratrum Pharm. Edinb. Elleborum album Matth. Helleborus albus flore ſubviridi C. B. Veratrum flore ſubviridi Tourn. Veratrum album Linn. WHITE HELLEBORE: a plant with large oval ribbed leaves, crumpled and plaited as it were, ſet alternately on a round firm ſtalk, and embracing it by a tubulous baſis: in their boſoms, towards the top, appear cluſters of hexapetalous greeniſh white flowers, followed each by three flat pods containing whitiſh triangular ſeeds: the root is ſhort, commonly near an inch thick, with numerous fibres hanging from it, externally of a browniſh colour, internally white. It is common in mountainous places in Germany, Switzerland, and ſome other parts of Europe.

WHITE hellebore root has, when freſh, a diſagreeable ſmell; but as brought into the ſhops, ſcarcely any: its taſte is nauſeous, bitteriſh, acrid, very penetrating and durable. The juice of the freſh root, in taſte extremely acrid, is ſaid, when mixed with the blood, to act as a poiſon. The powder of the dry root is ſometimes mixed with external applications for deſtroying cutaneous inſects: ſnuffed up the noſe, in ſmall quantity, it proves a violent ſternutatory, and in this intention is ſometimes uſed in lethargic and other diſorders.

This root, taken internally, in doſes of ten or fifteen grains, operates with great violence both upwards and downwards, and has ſometimes brought on convulſions and other terrible ſymptoms: Hoffman obſerves, that it peculiarly affects the fauces, producing a ſtrangulation and danger of ſuffocation, with extreme anxiety. It has been chiefly employed, and that but ſeldom, in ſome kinds of maniacal caſes, as a laſt reſource; in which it is ſaid to have taken place after the ſtronger of the antimonial preparations had been given without effect. In minute doſes, it has been ſometimes uſed for acuating other purgatives and emetics; and ſometimes alſo as an alterative or deobſtruent in ſtubborn chronical diſtempers. In this laſt intention it is doubtleſs a medicine of great power, but its effects have not yet been ſufficiently aſcertained, to entitle it to a place in general practice.

Infuſions of white hellebore root in water, and the extracts obtained by inſpiſſating them, in colour yellowiſh, in taſte leſs acrid than the root itſelf, appear to operate with leſs violence. Hermann, who makes the doſe of the hellebore in powder from ten grains to fifteen, directs an infuſion of a dram; and of the extract he gives about as much as of the root in ſubſtance. In the ſhops, the active parts of the root, extracted by water, are thence transferred into honey: a pound of the root is macerated three days in four pints of water, then boiled a little, the decoction, preſſed out and ſtrained, mixed with three pounds of clarified honey, and the mixture boiled down till the water has exhaled and the honey appears of its original conſiſtence. This preparation is uſed ſometimes, but rarely, in glyſters: a ſimilar combination of the active matter of the hellebore with vinegar and honey, reduced to the conſiſtence of a ſyrup, is recommended by Geſner, in an expreſs treatiſe on this plant, as a ſafe internal medicine in phlegmatic diſorders, particularly thoſe of the breaſt, and ſaid to promote, without diſturbance, all the natural excretions: preparations of this kind, however, have one great inconvenience, that they do not admit ſo much preciſion, in regard to the ſtrength, as is requiſite in a medicine of ſo great activity.

Mel helleboratum *Ph. L.*

Tinctura veratri

A tincture of white hellebore made in proof ſpirit is likewiſe milder, both in taſte and in operation, than the root in ſubſtance: a tincture drawn with a quart†, or two pounds and a half‡ of proof ſpirit from eight ounces of the root, is kept in the ſhops, and given ſometimes in doſes of a few drops as an alterative, and one or two drams and upwards as a cathartic and emetic. On inſpiſſating this tincture, the remaining extract is found to taſte ſtronger than that made with water, though not quite ſo pungent as the root itſelf.

† *Ph. Lond.*
‡ *Ph. Edinb.*

HELLE-

HELLEBORUS NIGER.

HELLEBORUS NIGER Pharm. Lond. & Linn. Melampodium & Helleborus niger Ph. Ed. Helleborus niger flore roſeo C. B. BLACK HELLEBORE: a low plant, without any other ſtalk than the pedicles of the leaves and flowers, which are pretty thick, and generally ſtreaked with red or purple: the leaf is divided, quite to the pedicle, into ſix, ſeven, or more, ſmooth firm ſegments reſembling bay-leaves, indented from about the middle to the extremity; the flower is large, naked, pentapetalous, of a pale roſe colour, with numerous ſtamina in the middle, which are followed by five or ſix pods full of ſhining blackiſh ſeeds, the petala continuing, and changing greeniſh: the root conſiſts of numerous fibres, hanging generally from a knotty head, externally of a black colour, internally white. It is perennial, grows wild in the mountainous parts of Germany, and flowers in our gardens in January.

BLACK hellebore root, in doſes of from ten grains to half a dram, proves a very ſtrong, though not very violent cathartic. The hellebore of the ancients, which was never ventured on without extreme caution and as a laſt reſource, appears to have been a different ſpecies from ours, much larger and of more violent operation, called by Tournefort *helleborus niger orientalis, ampliſſimo folio, caule præalto, flore purpuraſcente*, which is ſtill ſaid to be found in plenty about mount Olympus, and in the iſland of Anticyra, celebrated of old for the production of this reputed antimaniacal drug. In the preſent practice, this root or its preparations are uſed ſometimes as a purgative in caſes where the ſtronger cathartics are required; but oftener in ſmall doſes as an attenuant and deobſtruent. It is found particularly ſerviceable againſt obſtinate ſuppreſſions of the menſtrual purgations, in plethoric habits and ſanguine conſtitutions, where chalybeates are ineffectual or injurious.

The taſte of this root is bitter and pungent: chewed for a few minutes, it ſeems to benumb the tongue. The fibres are ſtronger in taſte, and medicinally more active, than the tuberous head; and the cortical part of this, than the internal. It is ſaid to prove purgative when applied only externally, in fomentations, to the belly or feet. Water extracts by coction, and proof ſpirit by digeſtion, nearly all the virtue of the hellebore: rectified ſpirit takes up chiefly the irritating reſinous part. After due coction in water, it gives out little to ſpirit: but after repeated digeſtions in pure ſpirit, it is ſaid ſtill to yield to water a conſiderable proportion of a diuretic mucilaginous ſubſtance: the quantity of watery extract amounts to about one third of the root, the ſpirituous only to about one fifth.

Extractum helleb. nigri *Pharm. Lond. & Edinb.*

The extract made with water is the beſt and ſafeſt preparation of this root when deſigned for a cathartic; as it contains both the purgative and diuretic parts of the hellebore, and as the irritating power of its active matter is conſiderably abated by the boiling: it may be given from eight or ten grains to a ſcruple or more, but is uſed oftener in conjunction with other materials of ſimilar intention, than by itſelf. *An extract of black hellebore, made in a very operoſe way by macerating the root in rectified ſpirits, and wine, and then ſtrongly expreſſing the liquor, which is afterwards repeatedly mixed with water, and evaporated to a due conſiſtence, is the principal ingredient of a celebrated medicine for the dropſy in France, known by the name of *Bacher's tonic pills.* The other articles are an extract of myrrh, and powder of Carduus benedictus. Theſe pills are ſaid to produce a very copious evacuation both by ſtool and urine; and at the ſame time to brace and ſtrengthen the ſolids. Their uſe is prohibited to perſons of a tenſe fibre, or who are ſuſpected to have internal ſuppurations. They are to be uſed with great caution alſo in hot climates. In dropſies with relaxation, they are ſaid to produce the happieſt effects.

Tinctura melampod. *Ph. Lond.*† *ſive* helleb. nigri *Pharm. Edinb.*‡

A tincture made in proof ſpirit appears the moſt eligible preparation for the purpoſes of an alterative and deobſtruent: four ounces of the root may be digeſted in a quart†, or two pounds and a half of the ſpirit‡, with the addition of thirty‡ or forty† grains of cochineal to render the colour more ſightly; and the filtered tincture given to the quantity of a tea-ſpoonful twice a day, in warm water or any other convenient vehicle. Dr. Mead informs us, that in menſtrual obſtructions the power of this medicine is ſo great, that when, from an ill conformation of the parts, or other cauſes, the expected diſcharge does not ſucceed upon the uſe of it, the blood is ſo forcibly propelled, as to make its way through other paſſages.

HEPATICA.

HEPATICA.

HEPATICA terreſtris ſive Lichen Ph. Edinb.(a) *Lichen petræus latifolius ſive hepatica fontana C. B. Hepatica terreſtris vulgaris ſeu lichen officinarum Raii hiſt.* i. 124. *Jecoraria. Marchantia polymorpha Linn.* LIVER-WORT: a ſpecies of moſs; conſiſting of numerous obtuſely laciniated leaves, lying over one another, marked on the ſurface with white tubercles reticularly diſpoſed through the green ſubſtance of the leaf, ſhooting out underneath fine capillary roots: from the extremities of the leaves iſſue clear whitiſh pedicles, bearing globular bodies, which when ripe contain black minute ſeeds like duſt. It is perennial, grows on moiſt ſtony places, and runs up to ſeed in March or April.

THIS moſs is recommended as an aperient, reſolvent, and purifier of the blood. From the penetrating though mild pungency and bitteriſhneſs of its taſte, ſinking as it were into the tongue, it promiſes to be a plant of no inconſiderable virtue, though in this country at preſent diſregarded. It gives out its active matter both to watery and ſpirituous menſtrua.

HEPATICA NOBILIS.

HEPATICA NOBILIS Pharm. Edinb.(a) *Hepatica trifolia ſive herba trinitatis Pharm. Pariſ. Trifolium hepaticum flore ſimplici C. B. Anemone Hepatica Linn.* HEPATICA, HERB-TRINITY: a low plant, without any other ſtalk than the pedicles of the leaves and flowers: the leaf is cut, not very deep, into three lobes, entire about the edges: the flower is commonly blue, ſometimes reddiſh or white, hexapetalous, ſet in a three-leaved cup, with numerous ſtamina in the middle, which are followed by a cluſter of whitiſh ſeeds. It is perennial, grows wild on gravelly ſhady grounds in Germany and other parts of Europe, and flowers in our gardens in March or ſooner.

THIS herb is a mild reſtringent and corroborant; in which intentions, infuſions of it have been drank as tea, or the powder of the dry leaves given to the quantity of half a ſpoonful at a time. Its aſtringent matter is diſſolved equally by water and ſpirit; and on inſpiſſating the filtered tinctures, remains entire in the extracts: it is found however, even when thus concentrated, to be ſtill but weak. The watery extract is larger in quantity, and proportionably weaker in taſte, than the ſpirituous.

(a) Expunged.

HERMODACTYLUS.

HERMODACTYLUS Pharm. Pariſ. HERMODACTYL: the root of a ſpecies of colchicum, brought from Turkey; of the ſhape of a heart, flatted on one ſide, with a furrow on the other; of a white colour; compact and ſolid, yet eaſy to cut or powder.

THIS root has a viſcous, ſweetiſh farinaceous taſte, and no remarkable ſmell. It was ranked by the ancients among the cathartics, but ſuch as we now meet with in the ſhops does not appear to have any purgative virtue. Alpinus relates, that hermodactyls, the ſame with what are ſold in Europe, are eaten by the Egyptian women to the quantity of ſeveral roots at a time; that they do not move the belly, or produce any ill effect: that they are ſuppoſed to be very nutritious, and contribute to procure the fatneſs and plumpneſs there admired *(a)*. Thoſe, who report them to be purgative, have probably aſcribed to the hermodactyls a part of the effects of the ſubſtances which were joined to them; for, being acknowledged ſlow in operation, they have been commonly acuated with aloes and other cathartics. They have long been an entire ſtranger to practice, and the colleges both of London and Edinburgh have now deſervedly expunged them from their catalogues of officinals.

HIBERNICUS LAPIS.

HIBERNICUS LAPIS & Tegula hibernica & Ardeſia hibernica Pharm. Edinb. (b) Hardeſia Pharm Pariſ. IRISH SLATE: a kind of ſlate, or very ſoft ſtone, found in different parts of Ireland; in the maſs of a blueiſh black colour and ſtaining the hands; when powdered, pale or whitiſh at firſt, and in keeping growing black; in the fire, yielding

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(a) De medicina Ægyptiorum, lib. iii. *cap.* 16. *& lib.* iv. *cap.* 1.

(b) Expunged.

ſulphureous fumes, and acquiring a pale red colour with an additional hardneſs.

This mineral appears from Dr. Rutty's experiments in his ſynopſis of mineral waters, to be a matrix of ferrugineous vitriol; which it diſcovered by its taſte, and by the black colour which infuſions of it ſtruck with galls. The ſpecimens I examined, procured from our ſhops, had no vitriolic taſte, and infuſions of them in water ſuffered no viſible change from galls: but that they contained materials from which vitriol is producible, appeared from the ſulphureous fumes they emitted in the fire, and from their giving out, when burnt, a calx of iron to aqua regis; the iron diſcovered itſelf by the tincture ſtriking a blue colour with the lixivium deſcribed under the article *ferrum:* their burning hard ſhews their earthy matter to be of the argillaceous kind. It may therefore be preſumed, that this foſſil conſiſts of argillaceous earth impregnated, like the pyritæ, with ſulphur and iron; and that, like the pyritæ alſo, it is capable of becoming vitriolic by long expoſure to the air and moiſture. It has been ſometimes taken by the common people, powdered and mixed with ſpruce beer, againſt inward bruiſes; but its medicinal uſe in any intention is not much to be commended, on account of the variability of its qualities.

HIPPOSELINUM.

HIPPOSELINUM ſive Smyrnium Ph. Edinb. (a) *Hippoſelinum theophraſti vel ſmyrnium dioſcoridis C. B. Macerone & olus atrum & herba alexandrina quibuſdam. Smyrnium Oluſatrum Linn.* ALEXANDERS: an umbelliferous plant, with leaves like thoſe of ſmallage but larger: producing thick, roundiſh, ſtriated, black ſeeds. It is biennial, grows wild about the ſea coaſts, and ſides of rivers, and flowers in May and June.

This plant is nearly ſimilar in quality to ſmallage, but ſomewhat ſtronger both in ſmell and taſte: it was formerly blanched in our gardens for culinary uſe, but has now given place to celeri, which is more grateful. The ſeeds are bitteriſh and aromatic, and have been now and then employed, like the other warm ſeeds, as carminatives, ſtomachics, and aperients: they give out their virtue imperfectly to water, completely to rectified ſpirit: in diſtillation with water, they yield a ſmall quantity of eſſential oil, ſmelling agreeably of the ſeeds, and in taſte moderately pungent. The roots are bitterer than the ſeeds, and ſtand recommended as reſolvents, diuretics, and emmenagogues: they yield, on inciſion, a whitiſh juice, which is ſaid, when inſpiſſated, to approach in taſte to myrrh; whence the plant has been called, from one of the names of that gummy-reſin, *ſmyrnium*.

(a) Expunged.

HORMINUM.

HORMINUM SATIVUM ſive Sclarea Pharm. Edinb.(a) *Horminum ſclarea dictum C. B. Gallitrichum ſativum J. B. Salvia Sclarea Linn.* GARDEN CLARY: a whitiſh green, ſlightly hairy plant, with ſquare ſtalks, and large wrinkled oblong ſomewhat heart-ſhaped leaves: both the leaves, and the diviſions and ſubdiviſions of the branches, ſtand in pairs: on the tops grow long ſpikes of blueiſh labiated flowers, at the origin of which are little concave purpliſh leaves without pedicles: the upper lip of the flower is long and arched, the lower ſmaller and cut into three ſegments, the middlemoſt of which is hollowed like a ſpoon. It is biennial, a native of the warmer climates, cultivated with us in gardens, and flowers in July and Auguſt.

THE leaves and ſeeds of clary are recommended as corroborants and antiſpaſmodics; particularly in the fluor albus and other like weakneſſes, and in hyſterical complaints. They have a bitteriſh warm taſte; and a ſtrong ſmell, of the aromatic kind, but to many perſons not agreeable. The leaves diſcover to the touch a large quantity of unctuous reſinous matter, in which the virtue of the herb appears to reſide, which is readily diſſolved by rectified ſpirit, and which, on inſpiſſating the fine green tincture, remains nearly entire in the dark browniſh extract: this extract ſmells more agreeably than the herb in ſubſtance, and is in taſte moderately warm, bitteriſh, and pungent. Water takes up likewiſe by infuſion great part of the active matter of the clary, and carries off its whole flavour in evaporation, leaving a weak, diſagreeably bitteriſh, roughiſh extract. In diſtillation with water, there ariſes both from the leaves and ſeeds, a ſmall quantity of eſſential oil, ſmelling ſtrongly of the clary: from ſixty-four ounces, or five hundred and twelve drams, of the ſeeds, was obtained only about one dram of oil. The leaves or ſeeds, fermented with malt liquors, are ſaid to remarkably increaſe their inebriative quality.

(a) Expunged.

HYOSCYAMUS.

HYOSCYAMUS Pharm. Pariſ. HENBANE: a plant with ſoft, hairy, oblong, deeply notched leaves; and bell-ſhaped flowers cut into four ſegments, followed by irregular cup-like capſules, whoſe cover falling off diſcloſes numerous ſmall ſeeds in two cells.

1. HYOSCYAMUS *Pharm. Edinb. Hyoſcyamus niger vel vulgaris C. B. Hyoſcyamus niger, ſive apollinaris herba, altercum arabum Lob. Faba ſuilla. Hyoſcyamus niger Linn.* Black henbane: with large leaves joined cloſe to the ſtalk; duſky coloured flowers; and greyiſh ſeeds. It is annual, grows wild in waſte rich grounds, and flowers in June.

2. HYOSCYAMUS ALBUS *Linn. Hyoſcyamus albus major vel tertius dioſcoridis & quartus plinii C. B.* White henbane: with ſmaller and woollier leaves ſet on pedicles; white flowers; and whitiſh ſeeds. It is annual, and a native of the ſouthern parts of Europe.

THESE plants have a fetid ſmell, of the narcotic kind: on the organs of taſte they make no conſiderable impreſſion, the leaves being little other than herbaceous, the ſeeds ſomewhat mucilaginous, and the roots ſweetiſh. The leaves, applied externally, in the form of cataplaſm, fomentation, or unguent, are ſaid to be refrigerant, diſcutient, and to abate not only inflammatory but rheumatic pains. All the parts, when taken internally, though in no great quantity, prove highly narcotic, and occaſion violent diſorders of the ſenſes, ſometimes of long duration, and ſometimes fatal. There are ſeveral inſtances alſo of the ſenſes being ſtrongly affected by the effluvia of the plant; and by the vapour that ariſes upon ſcorching it over the fire, which has by ſome been imprudently directed to be received into the mouth againſt toothachs *(a)*. The effect of ſmall doſes, inſufficient to do harm, are not well known. The ſeeds have been given from two or three grains to a ſcruple, and ſaid to have proved beneficial in ſpittings of blood and thin ſharp defluxions on the lungs, and likewiſe in ſome convulſive diſorders. The preſent practice, however, has deſervedly rejected a medicine of ſuch ſuſpicious qualities, and which appears to be at beſt but a precarious ſuccedaneum to the products of the poppy. It is ſaid, that the ſeeds are the mildeſt part, and the root the ſtrongeſt; that the black ſort is in all its parts ſtronger than the white; and that the ſeeds are the more deleterious, the more they approach to blackneſs.

HYPERICUM.

HYPERICUM Pharm. Lond. Hypericum vulgare C. B. Androſæmum ſive perforata Geſn. Hypericum perforatum Linn. ST. JOHN'S WORT: a plant with ſlender round woody reddiſh ſtalks, which have two fine ridges, or ſharp edgings, oppoſite, alternately, from joint to joint; ſmall oblong obtuſe leaves, ſet in pairs without pedicles; and numerous gold-coloured pentapetalous flowers on the tops of the branches, followed by little rough blackiſh huſks, each of which is divided into three cells full of minute ſeeds. It is perennial, grows wild in woods and uncultivated places, and flowers in June and July.

THIS plant has been recommended as a medicine of peculiar efficacy in hyſterical and hypochondriacal diſorders, and alienations of mind; from its ſuppoſed virtue in which caſes, it received the name of *fuga dæmonum*. It promiſes to be of ſome uſe as a mild detergent and corroborant, diſcovering to the ſenſes a reſinous, bitteriſh, balſamic impregnation. The leaves, viewed againſt the light, exhibit numerous tranſparent points, which are found to be little veſicles full of eſſential oil or reſinous matter; in diſtillation with water, the oil ſeparates and riſes to the ſurface, approaching in ſome degree to that of turpentine. About

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(a) Vide Lindeſtolpe, *De venenis, cap.* x. *theſ.* 20. *edit. Stentzel. p.* 559. Konig, *Regnum vegetabile, ſect.* iv. *p.* 869. Hoyer, *Acta phyſico-medica naturæ curioſorum, vol.* v. *obſ.* 69. *p.* 260. Hoffman, *Philoſophia corporis humani morboſi, p.* ii. *cap.* vii. §. 7. *Oper. omn.* i. 223. Haller, & auctores ab eo citatos, *Stirp. helvet. p.* 513.

the edges of the flower are obſerved black points, and on the ſeed veſſels ſmall tubercles, which appear to be ſimilar oily veſicles: the tops, when the ſeeds are formed, have the ſtrongeſt terebinthinate ſmell, and yield in diſtillation the greateſt quantity of oil. The flowery tops give a deep yellowiſh red tincture to rectified ſpirit, and a paler red to expreſſed oils: this colour does not appear to proceed from the ſubſtance of the leaves or flowers, but from the reſinous juice in the veſicles above mentioned. A tincture of the flowers in oil olive, made by macerating four ounces of the full blown flowers, freſh gathered and freed from the cups, in a quart of oil, till the oil is ſufficiently coloured, is kept for external purpoſes in the ſhops, but very rarely made uſe of. **Ol. hyperici** *Pharm. Lond.*

HYPOCISTIS.

HYPOCISTIDIS SUCCUS Pharm. Lond. The juice of HYPOCISTIS: an inſpiſſated juice, of a firm conſiſtence and a bright black colour; prepared from a certain fleſhy juicy vegetable production (*hypociſtis ſub ciſto C. B. Aſarum Hypociſtis Linn.*) which, in the warmer climates, grows up from the root of different kinds of the ciſtus or rock-roſe, three or four inches high, eaſy to break, cloathed with ſcales, bearing a number of little bell-ſhaped flowers on the top, but no leaves.

THIS juice is a mild aſtringent, of no particular ſmell or flavour. It is looked upon as ſimilar to the Egyptian acacia; from which, however, it differs remarkably in its pharmaceutical properties, the hypociſtis being almoſt totally diſſoluble in rectified ſpirit of wine, whereas acacia gives out little or nothing to that menſtruum. It is at preſent ſcarcely otherwiſe made uſe of among us, than as an ingredient in ſome of the old compoſitions.

HYSSOPUS.

HYSSOPUS Pharm. Lond. & Edinb. Hyſſopus officinarum cærulea ſive ſpicata C. B. Hyſſopus officinalis Linn. HYSSOP: a low ſhrubby plant; with brittle branched ſtalks, ſquare when young, and round when they grow woody; oblong narrow dark green leaves ſet in pairs; and looſe ſpikes of labiated blue flowers, whoſe upper lip is cloven and turned upwards, ſtanding in rows, towards the tops of the ſtalks, generally all on one ſide, in long ſtriated cups. It is perennial, cultivated in gardens, and flowers in July and Auguſt.

The leaves of hyſſop have an aromatic ſmell, and a bitteriſh moderately warm taſte. They give out their active matter both to water and rectified ſpirit, to the laſt moſt perfectly: the watery infuſions are of a browniſh or greeniſh yellow, the ſpirituous tinctures of a dark blackiſh green colour. On inſpiſſating the ſpirituous tincture, very little of the flavour of the herb exhales or diſtils with the menſtruum: the remaining extract is bitteriſh and very warm, and diſcovers a penetrating pungency, ſomewhat like that of camphor. Water, diſtilled from the freſh herb, is found pretty ſtrongly impregnated with its flavour: an eſſential oil ſeparates and riſes to the ſurface, to the quantity of about an ounce from ſix pounds of the leaves, in ſmell exactly reſembling the hyſſop, in taſte very pungent, in colour, when newly diſtilled, yellowiſh with a ſlight caſt of green, which by age changes to a browniſh: the decoction, remaining after the diſtillation, is diſagreeably roughiſh, bitteriſh, and ſubſaline.

This plant is accounted particularly ſerviceable, as an attenuant, corroborant, and expectorant, in humoural aſthmas, coughs, and other diſorders of the breaſt and ſtomach unaccompanied with inflammatory ſymptoms: in theſe caſes, infuſions of the leaves, which are not unpalatable, may be ſweetened with honey or ſugar, and drank as tea. The diſtilled water, by ſome made choice of as a baſis for pectoral mixtures and juleps, does not appear ſuperiour or equal to the infuſion.

JACOBÆA.

JACOBÆA Pharm. Pariſ. Jacobæa vulgaris laciniata C. B. Senecio major ſive flos ſancti jacobi Matthiol. Senecio Jacobæa Linn. Ragwort: a plant with a firm round ſtalk generally purpliſh; oblong dark green leaves, deeply jagged almoſt to the rib, and the ſections jagged again and ſomewhat crumpled: on the tops of the ſtalks grow umbel-like cluſters of yellow flowers, of the radiated diſcous kind, followed by ſmall oblong ſeeds winged with down. It is perennial, common in uncultivated fields and by road ſides, and flowers in July.

The leaves of ragwort have a roughiſh bitteriſh ſubacrid taſte, extremely nauſeous, far different from that of the herbaceous groundſel to which they have by ſome been accounted ſimilar. Simon Paulli relates, that they were found of great ſervice in an epidemic camp dyſentery, many ſoldiers having been cured of that diſeaſe by drinking a decoction of them; and expreſſes ſome concern, that a medicine of ſo much efficacy ſhould be at the ſame time ſo very diſguſtful to the palate. This however is an inconvenience that may be eaſily palliated: the active matter of ragwort, whatever its virtue may be, is diſſolved both by water and by rectified ſpirit, and on inſpiſſating the filtered tinctures, remains concentrated in the extracts; which may be taken, without offence to the palate, in the form of a bolus or pill. The ſpirituous extract is in leſs quantity than the watery, and proportionably ſtronger in taſte; though rather leſs nauſeous than the herb in ſubſtance.

JALAPIUM.

JALAPIUM Pharm. Lond. Jalapa Pharm. Edinb. Mechoacanna nigra. Jalap: the dried root of the *mirabilis peruviana* or marvel-of-peru, *mirabilia peruviana Gerard. ſolanum mexiocanum flore parvo C. B. Convolvulus Jalapa Linn.***(a)* a plant with thick, fleſhy radiſh-like roots; jointed ſtalks and branches; acuminated ſomewhat oval leaves ſet in pairs; and elegant, numerous, monopetalous, funnel-ſhaped flowers, purple, yellow, white, or diverſly variegated, ſtanding in double cups, of which the innermoſt incloſes the flower and the outer ſurrounds its baſis: each flower is followed by a wrinkled, roundiſh, pentagonal umbilicated fruit, about the ſize of a pepper corn, including a white kernel. It is perennial, a native of the Weſt Indies, and cultivated in our gardens on account of the beauty and duration of its odoriferous flowers, which open only during the night, and of which it produces continual ſucceſſions from June or July till checked by froſts; at which time the roots, which do not endure our winter, are taken up, and preſerved in ſand till ſpring. Whether the roots produced here are equivalent in virtue to thoſe which are brought from abroad, has not, that I know of, been tried.

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* *(a)* The later botaniſts are not perfectly agreed concerning the genus of the plant producing jalap. Linnæus firſt made it a *mirabilis*; and Bergius now gives it as the *mirabilis dichotoma Linn.*

The officinal jalap roots come from the province of Xalapa in New Spain; in thin tranſverſe ſlices, ſolid, hard, weighty, of a blackiſh colour on the outſide or cortical part, internally of a dark greyiſh with ſeveral black circular ſtriæ: the hardeſt, darkeſt coloured, and thoſe which have the moſt of theſe reſinous veins, are the beſt. Slices of bryony root, which are ſaid to be ſometimes mixed with them, may be diſtinguiſhed by their whiter colour and leſs compact texture.

THIS root has ſcarcely any ſmell, and very little taſte upon the tongue: ſwallowed, it affects the throat with a ſlight kind of pungency and heat. Taken in doſes of a ſcruple or half a dram, it proves an effectual and in general a ſafe purgative; very rarely occaſioning any ſevere gripes or nauſea, which too frequently accompany the other ſtrong cathartics. Some have prohibited the uſe of this cathartic to children; probably on no very good foundation. Young children, from the laxity of their ſolids, and the ſoft lubricating quality of their food, generally bear theſe kinds of medicines better than adults, and adults of a ſpongy, lax, or weak habit, better than the rigid or robuſt. Few, if any, of the ſtrong reſinous purgatives are in either caſe more innocent than jalap.

Jalap root, digeſted in as much rectified ſpirit as will cover it to the height of about four fingers, gives out greateſt part of the reſinous matter in which its activity reſides, and tinges the menſtruum of a yellowiſh brown colour. On inſpiſſating the filtered tincture to about one half, and adding to the remainder a proper quantity of water, the liquor becomes milky, and on ſtanding depoſites the pure reſin. This preparation, given by itſelf, irritates and gripes violently, without proving conſiderably purgative: thoroughly triturated with teſtaceous or other powders, or with ſoap; or ground with almonds or powdered gum-arabic, and made into an emulſion with water; or diſſolved in rectified ſpirit, and mixed with a proper quantity of ſyrup, that the ſolution may bear being diluted with watery liquors without precipitation; it purges, in doſes of eight or ten grains, as effectually, and for the moſt part as mildly, as the jalap in ſubſtance.

The jalap remaining after ſufficient digeſtion with ſpirit, has no cathartic virtue: boiled in water, it gives out a mucilaginous ſubſtance, which operates only by urine. Water applied at firſt takes up a portion of the reſin along with the gum, and hence the watery decoction and extract prove weakly cathartic as well as diuretic: the root ſtill retaining great part of its reſin, ſo as to purge conſiderably. The reſinous and gummy parts may be united into one extract, by firſt drawing a tincture from the powdered root with rectified ſpirit, then boiling the reſiduum in freſh quantities of water, evaporating the decoctions till they begin to grow thick, mixing in by degrees the tincture inſpiſſated to a like thickneſs, and continuing a gentle heat till the whole is reduced to a due conſiſtence. This extract may be taken by itſelf in doſes of twelve grains or more: the gummy matter of the jalap being ſufficient to divide the reſin and prevent its too violent irritation. Extractum jalappæ *Ph. Lon. & Edin.*

The proportion of active matter differs greatly in different parcels of jalap; ſixteen ounces of ſome ſorts yielding hardly two of reſin, while the ſame quantity of others affords three or four. Hence the extracts of jalap appear preferable to the root in ſubſtance, not only on account of the doſe being rendered ſmaller by the rejection of the woody parts, but likewiſe as being more uniform and certain in ſtrength. Tinctures of jalap made in proof ſpirit are nearly ſimilar in quality to the gummy-reſinous extract, this menſtruum taking up both the reſinous and gummy parts of the root: theſe preparations, made from different kinds of jalap, will vary in ſtrength ſomewhat more than the ſolid extract or reſin, but not ſo much as ſome have ſuſpected, or as the roots in ſubſtance; for in the proportions uſually employed, the proof ſpirit does not take up the whole of the virtue of any kind of jalap, and perhaps it does not extract much more from one kind than from another, provided the jalap be of moderate goodneſs. Tinct. jalap. If three † or four ‡ ounces of jalap be digeſted in a pint of proof ſpirit, the reſiduum will ſtill give out a portion of reſinous matter to rectified ſpirit, and this reſin will be in greater quantity in proportion as the root itſelf was the more reſinous.

† *Ph. Edinb.*
‡ *Ph. Lond.*

ICHTHYOCOLLA.

ICHTHYOCOLLA Ph. Edinb.(a) Isinglas or Fish-glue: a ſolid glutinous ſubſtance, prepared from a fiſh of the ſturgeon kind, caught in the rivers of Ruſſia and Hungary. The ſkin, fins, *&c.* are boiled in water, the decoction inſpiſſated to a due conſiſtence, and then

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(a) Expunged.

poured out ſo as to form thin cakes; which are either exſiccated in that form, or cut while ſoft into ſlices and rolled up into ſpiral, horſe ſhoe, and other ſhapes. The beſt is in thin, clear, and almoſt tranſparent pieces.

* A different account of the formation of iſinglaſs is given by Mr. Jackſon in *Philoſ. Tranſ.* Vol. LXIII. Part I. He aſſerts that the ſolution of animal ſubſtances of every kind gives *glue*, not *iſinglaſs*; that this laſt is nothing more than certain membranous parts of fiſhes, as the air-bladder, inteſtines, peritonæum, *&c.* in their entire ſtate, only freed from their natural mucus and adhering matters, and rolled and twiſted into the forms in which we get it.

Ichthyocolla is one of the pureſt and fineſt of the animal glues, of no particular ſmell or taſte. Beaten into ſhreds, it diſſolves pretty readily in boiling water or milk, and forms a gelatinous ſubſtance, which yields a mild nutriment, and proves uſeful medicinally in ſome diſorders ariſing from a ſharpneſs and colliquation of the humours. A ſolution of it in water, curiouſly ſpread, whilſt hot, upon ſilk, affords an elegant ſticking plaſter for ſlight injuries of the ſkin, not eaſily ſeparable from the part by water, and ſcarcely inferiour to the more compounded one ſold under the name of the ladies black plaſter, in which different balſams and reſins are joined to the ichthyocolla.

ILLECEBRA.

ILLECEBRA, *Vermicularis*, *Piper murale*, *Sedum minus*. *Sempervivum minus vermiculatum acre C. B.* *Sedum acre Linn.* Wall-pepper or Stonecrop: a ſmall plant, having its ſtalks covered with little fleſhy conical leaves ſet thick together in the manner of ſcales: on the tops appear pentapetalous yellow flowers, each of which is followed by ſeveral pods full of ſmall ſeeds. It is annual, grows on old walls and dry ſtony grounds, and flowers in July.

This plant has a very acrid taſte, and no remarkable ſmell: applied externally, it veſicates the part: taken internally, in no great quantity, it proves ſtrongly emetic. Its active matter appears, from the accounts given by authors, to be in great part forced out along with the watery juice by expreſſion; to diſſolve both in water and fermented liquors by infuſion; and not to be diſſipated, or not ſoon, by boiling. It is ſaid to have been uſed with ſucceſs in ſundry chronical diſorders*(a)*, but its durable acrimony, and the great vehemence of its operation, have prevented its being received in practice.

IMPERATORIA.

IMPERATORIA Ph. Edinb. Imperatoria major C. B. Imperatoria aſtrutium Lob. & Linn. Aſtrantia Dod. Smyrnion hortenſe Trag. Struthium hodie vocatum Cord. Masterwort: an umbelliferous plant, with large winged leaves divided into three indented ſegments; producing thick oblong, ſtriated ſeeds ſurrounded with a narrow leafy margin: the roots are oblong, thick, knobby, jointed, with ſeveral lateral fibres, brown on the outſide and whitiſh within. It is perennial, a native of the Alps and Pyreneans, from whence we are ſupplied with roots ſuppoſed to be ſuperiour to thoſe which are raiſed in our gardens.

The root of imperatoria is a very warm and moderately grateful aromatic, nearly of the ſame nature with that of angelica. Infuſed in water, or digeſted in rectified ſpirit, it impregnates both menſtrua ſtrongly with its fragrant ſmell; the former weakly, the latter ſtrongly, with its warmth, pungency, and bitteriſhneſs; the former with a muddy browniſh, the latter with a bright yellow colour. On inſpiſſating the ſpirituous tincture, very little of its flavour exhales with the ſpirit: the remaining deep yellow extract ſmells moderately of the root, and impreſſes on the organs of taſte a conſiderable bitterneſs and glowing pungency. Water carries off in evaporation nearly all the ſpecific flavour of the maſterwort, leaving, in the dark brown extract, a nauſeous bitterneſs with a ſlight degree of warmth or acrimony.

IPECACOANHA.

*IPECACOANHA Ph. Lond. Ipecacuanha Ph. Edinb. Hipecacuanna; Radix brazilienſis. Pſychotria emetica Linn.**(b) Ipecacoanha:

(a) Below, *Eph. nat. curioſ. dec.* i. *ann.* vi & vii. *obſ.* 22. Boerhaave, *Hiſt. plant. p.* 369.

**(b)* This is the name given it in the ſupplement to Linnæus: it was formerly reckoned by him a ſpecies of *Lonicera*.

ANHA: a ſlender root, brought from the Spaniſh Weſt Indies, in ſhort pieces, variouſly bent and contorted, full of wrinkles and deep circular fiſſures, which reach quite down to a ſmall whitiſh woody fibre that runs in the middle of each piece: the cortical part is compact, brittle, and looks ſmooth and reſinous on breaking. Two ſorts of this root are met with in the ſhops, one brought from Peru, the other from Brazil; uſually denominated from their external colour, the firſt *whitiſh*, *grey*, or *aſh-coloured*, the other *brown* ipecacoanha. The firſt is generally preferred, being found to operate with the greateſt certainty and mildneſs.

A root has been brought over under the name of white ipecacoanha, which has little or nothing of the virtues of the two foregoing: this is readily diſtinguiſhed by its yellowiſh white colour, woody texture, and having no fiſſures or wrinkles. More dangerous abuſes have ſometimes been committed, by the ſubſtitution or mixture of the roots of an American *apocynum*, which have been found to operate with great violence both upwards and downwards, and in ſome inſtances, as is ſaid, to prove fatal: theſe may be known by their being larger than the true ipecacoanha, the fiſſures more diſtant, the intermediate ſpaces ſmoother, and more particularly by the colour of the medullary fibre, which in the poiſonous roots is a deep reddiſh yellow, in the true ipecacoanha a whitiſh or pale greyiſh.

IPECACOANHA has ſcarcely any ſmell, unleſs during its pulverization or infuſion in liquors, in which circumſtances it emits a faint nauſeous one: in chewing, the wrinkled cortical part proves bitteriſh and ſubacrid, and covers the tongue as it were with a kind of mucilage; the medullary woody fibre is nearly inſipid, and gives out to menſtrua very little active matter. Geoffroy obſerves, that in pulverizing conſiderable quantities, the finer powder that flies off, unleſs great care be taken to avoid it, is apt to affect the operator with a difficulty of breathing, a ſpitting of blood, a bleeding at the noſe, or a ſwelling and inflammation of the eyes and face, and ſometimes of the throat; and that theſe ſymptoms go off in a few days, either ſpontaneouſly, or by the aſſiſtance of venæſection. *In the Philoſophical Tranſactions, Vol. LXVI. Part I. is a remarkable caſe of violent aſthmatic fits in a lady cauſed by the effluvia of powdered ipecacoanha.

This root is the mildeſt and ſafeſt emetic that has yet been diſcovered; and may be ventured on almoſt in the loweſt circumſtances where the ſtomach requires to be unloaded. The common doſe is from ten grains to a ſcruple and upwards: in the medical obſervations and enquiries publiſhed by a ſociety of phyſicians in London, a great number of caſes are mentioned, in which two grains operated ſufficiently: in conſtitutions which bore vomiting ill, and which were greatly ruffled by the uſual doſes, two or three grains operated with great eaſe. Where it fails of operating upwards, it commonly purges, and ſometimes conſiderably: in this intention it may be employed, in ſeveral caſes, to advantage, in conjunction with other purgatives, to determine its action downwards: I have found fifteen grains of jalap, with two or three of ipecacoanha, purge more than twice the quantity of jalap by itſelf.

The ipecacoanha was firſt introduced, about the middle of laſt century, as a ſpecific in dyſenteries; and repeated experience has confirmed its efficacy in this diſtemper, not only when uſed as an emetic, but likewiſe when given in ſuch ſmall doſes as ſcarcely to affect the groſſer emunctories. In common dyſenteric fluxes, it frequently performs a cure in a very ſhort ſpace of time; not by its exerting an aſtringent power, as ſome have ſuppoſed, for it does not appear to have any real aſtringency; nor by its mucilaginous ſubſtance covering the inteſtines and incraſſating thin humours, as others, with more plauſibility, have inferred both from its mucilaginous taſte, and from the ropineſs and ſlimineſs which it manifeſtly communicates to the contents of the ſtomach; but apparently by promoting perſpiration, the freedom of which is in theſe caſes of the utmoſt importance, and an increaſe of which, even in a ſtate of health, is generally obſerved to diminiſh the evacuation by ſtool. In common dyſenteries, the ſkin is for the moſt part dry and tenſe, and perſpiration obſtructed: and indeed this obſtruction, and the converſion of the perſpirable matter upon the inteſtines, is very frequently the immediate cauſe of the diſeaſe. Moſt of the common diaphoretics paſs off, in theſe caſes, without effect: but ipecacoanha, if the patient after a puke or two be covered up warm in bed, brings on a free diaphoreſis or a plentiful ſweat, by which I have often known the diſtemper terminated at once.

In putrid or malignant dyſenteries, or where the patient breathes a tainted air, it has not been found equally ſucceſsful: it requires here to be continued for ſeveral days, or repeated as an evacuant, with the further aſſiſtance of rhubarb, cordial antiſeptics, and mild opiates or aſtringents. Where plentiful evacuation is neceſſary, or the offending matter lodged deep, and the operation can be borne without inconvenience, the ipecacoanha, as Dr. Pringle obſerves, is moſt advantageouſly given in ſmall quantities at a time, and repeated at proper intervals, till a vomiting or purging comes on.

*In the ſpaſmodic aſthma, Dr. Akenſide remarks, that where nothing contraindicates repeated vomiting, he knows no medicine ſo effectual as ipecacoanha. In violent paroxyſms, a ſcruple procures great and immediate relief. For habitual indiſpoſition, from three to five grains every morning, or from five to ten every other morning, may be given for a month or ſix weeks. It is equally uſeful where it does not vomit, as where it does. The relief ſeems owing to its general antiſpaſmodic or relaxing property, of which its emetic operation is probably a particular conſequence (a).

*In the *Stockholm acts* 1770, are ſeveral caſes of uterine hæmorrhagies cured by ⅓ or ½ grain, rubbed with ſugar, given every four hours or oftener. In one caſe, the hæmorrhage returned on diſcontinuing the medicine, and ceaſed on repeating it. Theſe ſmall doſes had good effects in catarrhal coughs, even in thoſe which attend conſumptions; and if not beneficial, are at leaſt not hurtful, in bloody coughs, in which vomiting has ſeveral times been obſerved to come on, without any increaſe of the hæmorrhage. They may be uſeful in peripneumony and pleuriſy, in which cough is often the moſt troubleſome ſymptom, and in which Seneka root (which in increaſed doſes proves alſo emetic) has been ſo much recommended.

The emetic virtue of ipecacoanha reſides in its reſinous parts. By digeſting the root in freſh quantities of rectified ſpirit, and inſpiſſating the filtered tinctures, a reſinous extract is obtained, to the quantity of about three ounces from ſixteen, which, by itſelf, vomits ſtrongly, and with great irritation: the reſiduum yields to water nearly four ounces of a ſoft tenacious mucilage, which has ſcarcely any ſenſible operation. If only a part of the reſin be extracted, by ſlight digeſtion in a little highly rectified ſpirit, the remaining root proves more gentle, and rather purgative than emetic: in this ſtate it is recommended by ſome in dyſenteries accompanied with a conſiderable fever, where the root with its natural quantity of reſin might irritate too much; but as ſmall doſes of the root itſelf operate with all the eaſe and gentleneſs that can be wiſhed for, this precarious method of weakening it does not appear adviſeable.

(a) Med. Tranſact. I. 93.

By boiling it in water, a part of the reſin is taken up with the mucilage; the extract amounting to about ſix ounces from ſixteen, and proving mildly emetic. The beſt menſtruum for extracting the entire virtue of the root appears to be a mixture of one part of pure ſpirit with two or rather three parts of water: after ſufficient digeſtion in this menſtruum, neither water nor ſpirit took up any thing conſiderable from the remainder. In the ſhops wine is employed: an ounce of the root is macerated or digeſted in a pint of canary † or fifteen ounces of mountain ‡; to which ſome add a quarter of an ounce of dried orange peel † to cover the unpleaſant flavour of the ipecacoanha. Theſe tinctures, in doſes of from half an ounce or leſs to an ounce and upwards, prove mildly emetic.

Vinum ipecacoanhæ
† *Ph. Lond.*
‡ *Ph. Edinb.*

IRIS.

IRIS: a perennial plant with long narrow ſword-like leaves, ſtanding edgewiſe to the ſtalk; and large naked flowers, divided deeply into ſix ſegments, of which, alternately, one is erect and another arched downwards, with three ſmaller productions in the middle, incloſing the ſtamina and piſtil: the roots are tuberous, irregular, and full of joints.

1. IRIS NOSTRAS PURPUREA *Ph. Edinb.(a)* *Iris vulgaris germanica ſive ſilveſtris C. B.* *Iris germanica Linn.* Flower-de-luce, common iris or orrice: with blue flowers, whoſe arched ſegments are bearded with a yellowiſh matter, ſtanding ſeveral on one ſtalk higher than the leaves. It is a native of the mountainous parts of Germany, common in our gardens, and flowers in June.

THE roots of this plant have, when freſh, a diſagreeable ſmell, and an acrid nauſeous taſte. They are a ſtrong irritating cathartic; in which intention, their expreſſed juice has been given in hydropic caſes, from

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(a) Expunged.

one or two drams to three or four ounces, diluted largely with watery or vinous liquors, to prevent its inflaming the throat. The remarkable differences in the doſe, as directed by different practical writers, appear to have proceeded from hence; that ſome employed the juice in its recent turbid ſtate, loaded with the acrimonious cathartic matter of the root; others, ſuch as had been depurated by ſettling, and which had depoſited, along with the feculencies, a great ſhare of the active parts. By gently inſpiſſating the juice, it is rendered leſs violent in cathartic power, and leſs liable to irritate and inflame; but becomes at the ſame time too precarious in ſtrength to be depended on: by inſpiſſation to perfect dryneſs, its purgative virtue is almoſt, if not altogether, deſtroyed. The root itſelf loſes alſo, in drying, its offenſive ſmell, and its nauſeous acrimony, and along with theſe its cathartic quality: in this ſtate, it diſcovers a ſlight and not diſagreeable pungency and bitteriſhneſs, accompanied with a kind of aromatic flavour, nearly of the ſame kind with that of the following ſpecies, but weaker and leſs grateful.

The blueiſh expreſſed juice of the flowers changes on being inſpiſſated, eſpecially if a little lime-water is added, to a fine green; and in this form is directed, in foreign pharmacopœias; for tinging ſome of the unctuous compoſitions called odoriferous or apoplectic balſams.

2. IRIS *Ph. Lond.* *Iris florentina Ph. Edinb. & Linn.* *Iris alba florentina C. B.* Florence orrice; ſuppoſed to be only a variety of the foregoing occaſioned by difference of climate; diſtinguiſhable from it in our gardens, by the flowers being white, and the leaves inclining more to blueiſh. The ſhops are ſupplied from Italy with dried roots ſuperiour to thoſe of our own growth; in oblong flattiſh pieces freed from the fibres and browniſh bark, externally of a whitiſh colour with browniſh ſpecks, internally inclining to yellowiſh, eaſily reducible into a farinaceous yellowiſh white powder.

THIS root, in its recent ſtate, does not ſeem to differ much from the preceding; being, like it, nauſeous, acrimonious, and purgative, though not quite in ſo great a degree; and loſing theſe qualities on being dried. The dry root, as met with in the ſhops, has an unctuous, bitteriſh, pungent taſte, not very ſtrong, but very durable in the mouth:

and a light agreeable ſmell, approaching to that of violets. It is uſed in perfumes; in ſternutatory powders; for communicating a grateful flavour, ſomewhat like that of raſpberries, to wines and to ſpirits; and medicinally in diſorders of the breaſt, for attenuating viſcid phlegm, and promoting expectoration. Its ſmell and taſte are extracted both by water and rectified ſpirit, moſt perfectly by the latter. In diſtillation, it gives over with water the whole of its peculiar flavour, its bitterneſs and a ſlight acrimony remaining in the inſpiſſated extract: the diſtilled water ſmells very agreeably, but no eſſential oil is obtained though ſome pounds of the root be ſubjected to the operation at once. Rectified ſpirit brings over a part of its violet ſmell, but little or nothing of its warmth or taſte: the inſpiſſated extract is a pungent, bitteriſh, balſamic maſs, glowing in the mouth like pepper; its quantity is about one fifteenth of the weight of the root.

3. GLADIOLUS LUTEUS *Ph. Lond.* *Iris paluſtris Ph. Edinb.* *Iris paluſtris lutea Ger.* *Acorus vulgaris Pharm. Auguſtan.* *Acorus adulterinus C. B.* *Pſeudoacorum Matth.* *Pſeudoris Dod.* *Butomon Cluſ.* *Iris Pſeud-Acorus Linn.* Yellow water-flag, baſtard acorus, ſedge: with reddiſh roots, yellow unbearded flowers ſtanding ſeveral on one ſtalk, and the middle ribs of the leaves prominent. It is common by the ſides of rivers and marſhes, and flowers in June.

THE roots of this ſpecies are, when freſh, rather more acrid, and more ſtrongly cathartic, than either of the preceding. The expreſſed juice, given to the quantity of eighty drops every hour or two, and occaſionally increaſed, has, in ſome inſtances, produced plentiful evacuations, after jalap, gamboge, and mercurials had failed (a): but however ſucceſsful it may have ſometimes been as a draſtic purgative, it is accompanied, like the other iriſes, with a capital inconvenience; its ſtrength being ſo precarious, or ſo variable in different ſtates, that it is by no means fit for general uſe. The juice, both of this and of the other kinds of iris, has been employed alſo externally for clearing the ſkin of ſerpiginous eruptions; and ſometimes ſnuffed up the noſe as a ſtrong errhine: even for theſe purpoſes it is to be uſed with caution, being ſubject, by its great acrimony, to inflame or veſicate the parts.

(a) *Edinburgh medical eſſays, vol.* v. *art.* 8.

The dry roots are much weaker and leſs agreeable than thoſe of either of the preceding ſpecies of iris. They have ſcarcely any ſmell; and when chewed in ſubſtance, diſcover very little taſte. An extract made from them by rectified ſpirit is likewiſe weaker and more nauſeous, though its quantity is leſs, amounting only to one twenty-fourth of the weight of the root: it has nothing of the flavour or aromatic warmth of thoſe of the other two, but an ungrateful auſtere bitteriſhneſs and a kind of ſaline pungency. It is the root in this dry ſtate that the writers on medicines mean, when they ſpeak of the yellow water-flag root as being aſtringent and ſtomachic: it does not, however, appear to have any great claim to theſe virtues, and among us is no otherwiſe made uſe of than as an ingredient in the officinal arum powder, in which it is ſaid to be employed only in deference to the original of Birckmann firſt publiſhed by Quercetanus.

JUJUBÆ.

JUJUBÆ Ph. Pariſ. Jujubæ majores oblongæ C. B. Zizyphus Dod. Rhamnus Zizyphus Linn. JUJUBES: a half-dried fruit of the plum kind, about the ſize and ſhape of an olive: conſiſting of a pretty thick reddiſh yellow ſkin, a whitiſh fungous pulp, and a wrinkled ſtone pointed at both ends: the produce of a prickly tree, with three-ribbed leaves, and herbaceous or yellowiſh flowers, ſometimes found wild, and commonly cultivated in the ſouthern parts of Europe.

This fruit, when in perfection, has an agreeable ſweet taſte; and in thoſe countries where it is common, makes an article of food in its recent ſtate, and of medicine when half dried; decoctions of it being uſed, like other glutinous ſweets, as incraſſants, and demulcents in defluxions on the breaſt. Among us, it has long ſtood neglected, and is now become a ſtranger to the ſhops; the tree not producing fruit in this climate; and that, which we received from abroad, being commonly mouldy or carious.

ANOTHER fruit of the ſame kind, of a dark blackiſh hue, furniſhed with an aſh-coloured cup at the bottom, from which it eaſily parts, is ſometimes brought from the eaſtern countries, under the names of *ſebeſten*, *myxa*, or *myxaria*. It is produced by the *Cordia Myxa* of Linnæus. It is more glutinous than the jujube; to which it has been commonly joined in pectoral decoctions; and along with which it is now diſcarded by the colleges both of London and Edinburgh.

JUNCUS ODORATUS.

JUNCUS ODORATUS Pharm. Lond. Juncus odoratus ſive aromaticus C. B. Schœnanthus, ſquinanthum, fœnum camelorum, & palea de mecha Quibuſdam. Andropogon Schœnanthus Linn. SWEET RUSH or CAMEL'S HAY: a dried herb, of the graſs kind, brought from Turkey and Arabia, in bundles about a foot long; conſiſting of ſmooth ſtalks, in ſhape and colour ſomewhat reſembling barley ſtraws, full of a fungous pith like thoſe of ruſhes; and leaves like thoſe of wheat ſurrounding the ſtalk with ſeveral coats: towards the tops of the ſtalks are ſometimes found ſhort woolly ſpikes of imperfect red flowers, ſet in double rows.

THE ſweet ruſh, when in perfection, has an agreeable ſmell, and a warm, bitteriſh, not unpleaſant taſte. Diſtilled with water, it yields a ſmall quantity of a yellowiſh, fragrant, and very pungent eſſential oil: the remaining decoction, thus diveſted of the aromatic matter of the plant, proves unpleaſantly roughiſh, bitteriſh, and ſomewhat acrid. A tincture made in rectified ſpirit, in colour greeniſh yellow, yields, on being inſpiſſated, a tolerably grateful, bitteriſh, aromatic extract. This plant, formerly employed as a warm ſtomachic and deobſtruent, appears from the above experiments to be of no inconſiderable activity; but in this country, more common aromatic vegetables have now ſuperſeded its uſe. It is kept in the ſhops only as an ingredient in the mithridate and theriaca; and the college of Edinburgh, having at laſt expunged thoſe compoſitions, have dropt the *juncus odoratus*.

JUNIPERUS.

JUNIPERUS: juniperus vulgaris fruticoſa C. B. Juniperus communis Linn. JUNIPER: an evergreen tree or buſh, clothed with ſlender narrow ſtiff ſharp leaves, like prickles, which ſtand generally three together:

gether: the flowers are a kind of ſmall ſcaly catkins growing on one plant; the fruit, round berries, growing on a different one, containing, each, three oblong irregular ſeeds. It is common on heaths in different parts of Europe; and is found, at all ſeaſons of the year, both with unripe green or red berries, and with ripe blueiſh black ones.

The BERRIES, *baccæ juniperi Pharm. Lond. & Edinb.* are brought chiefly from Holland and Italy: they ſhould be choſen freſh, not much ſhrivelled, and free from mouldineſs, which they are very ſubject to contract in keeping. They have a moderately ſtrong not diſagreeable ſmell, and a warm pungent ſweetiſh taſte, which if they are long chewed or previouſly well bruiſed, is followed by a conſiderable bitterneſs. The ſweetneſs appears to reſide in the juice or ſoft pulpy part of the berry; the bitterneſs, in the ſeeds; and the aromatic flavour, in oily veſicles, ſpread throughout the ſubſtance both of the pulp and of the ſeeds, and diſtinguiſhable even by the eye. The freſh berries yield, on expreſſion, a rich, ſweet, honey-like aromatic juice: if previouſly powdered, ſo as to thoroughly break the ſeeds, which is not done without difficulty, the juice proves tart and bitter. The ſame differences are obſervable alſo in tinctures and infuſions made from the dry berries, according as the berry is taken entire or thoroughly bruiſed.

They give out nearly all their virtue both to water and rectified ſpirit, and tinge the former of a browniſh yellow, the latter of a bright orange colour. Diſtilled with water, they yield a yellowiſh eſſential oil, very ſubtile and pungent, in ſmell greatly reſembling the berries, in quantity (if they have been ſufficiently bruiſed) about one ounce from forty: the decoction, inſpiſſated to the conſiſtence of a rob or extract, has a pleaſant, balſamic, ſweet taſte, with a greater or leſs degree of bitteriſhneſs. A part of the flavour of the berries ariſes alſo in diſtillation with rectified ſpirit: the inſpiſſated tincture conſiſts of two diſtinct ſubſtances; one oily and ſweet: the other tenacious, reſinous, and aromatic.

Ol. e baccis juniperi *Ph. Lond.&Edin.*

Theſe berries are uſeful carminatives, detergents, and diuretics. The diſtilled oil is a very ſtimulating diuretic, approaching in quality to that of turpentine, like which, it impregnates the urine with a violet ſmell: the ſpirituous extract gives the ſame kind of ſmell; as does likewiſe the berry in ſubſtance, in a lower degree; but the watery extract or rob, as being diveſted of the oil, has no ſuch effect. This laſt may be uſed with advantage in caſes where the more ſtimulating preparations would be improper;

proper; as in catarrhs, debilities of the ſtomach and inteſtines, and difficulties of the urinary excretions, in perſons of an advanced age. Among the aromatics that have been tried in compoſition with juniper berries, ſweet fennel ſeeds and caraway ſeeds ſeem the beſt adapted to improve their flavour: a cordial water is prepared in the ſhops by drawing off a gallon of proof ſpirit from a pound of the berries and an ounce and a half of each of the ſeeds. The water is ſtrongly impregnated with the volatile virtue of the berry; to which the more fixt ones may in many caſes be uſefully ſuperadded, by mixing with it a proper quantity of the rob.

Aq. juniperi comp. *Ph. L.*

The WOOD, *lignum juniperinum Ph. Edinb.(a) cedrinum lignum Ph. Pariſ.* has been recommended as a ſudorific, and by ſome accounted ſimilar to guaiacum or ſaſſafras, to either of which it is greatly inferiour. It has a weak not unpleaſant ſmell, and very little taſte: decoctions and extracts, made from it with water, are diſagreeably bitteriſh, ſubaſtringent, and balſamic: the ſpirituous tinctures are weaker than the watery, and yield, on being inſpiſſated, an almoſt inſipid reſin. The quantity of watery extract, according to Cartheuſer's experiments, is about one twelfth the weight of the wood; of ſpirituous extract, one eighth.

IN the warmer climates, particularly on the coaſts of Africa, there exudes, from a larger ſpecies of juniper, a reſinous juice, which concretes into ſemipellucid pale yellowiſh tears or glebes, reſembling maſtich, but larger; the *ſandaracha* of the Arabians, and *gummi juniperinum* of the ſhops *(Ph. Edinb.(a)* called by ſome, from the uſe to which it has been principally applied, *vernix*. This reſin has a light agreeable ſmell, and no conſiderable taſte: it diſſolves in rectified ſpirit, and in oils both expreſſed and diſtilled, but gives out little or nothing to watery liquors, and thus diſcovers that it is nearly a pure reſin. It is ſuppoſed to be ſimilar in quality, as in appearance, to maſtich; and has been ſometimes given internally, againſt hemorrhagies, old fluxes, and ulcerations; but principally employed externally in corroborant, nervine, traumatic applications. Among us, it is ſcarcely ever made uſe of for any medicinal purpoſes; other reſinous ſubſtances, more common in the ſhops, being apparently ſuperiour to it.

(a) Expunged.

KALI.

KALI Pharm. Edinb. [(a)] *Kali majus cochleato ſemine C. B. Salſola quibuſdam. Salſola Soda Linn.* SNAIL SEEDED GLASSWORT or SALTWORT: a plant with ſpreading, reddiſh, pretty thick branches; oblong, narrow, pointed, fleſhy leaves like thoſe of the houſeleeks; and imperfect flowers in the boſoms of the leaves, followed each by one ſeed ſpirally curled and incloſed in the cup. It is annual, and grows wild on the ſea coaſts in the ſouthern parts of Europe, particularly of the Mediterranean.

THIS herb is very juicy, in taſte bitteriſh and remarkably ſaline. The expreſſed juice, and infuſions or decoctions of the leaves, are ſaid to be powerfully aperient and diuretic, and in this intention have by ſome been greatly recommended in hydropic caſes: half a dram of the juice is reckoned a ſufficient doſe. But the kali is principally regarded, on account of its yielding copiouſly, when burnt, the fixt alkaline ſalt called *ſoda* or *ſoude:* an impure ſoda is prepared from it about Montpelier, where the plant is ſaid to be cultivated for this uſe in the ſalt marſhes; and a purer kind at Alicant in Spain from a ſomewhat different ſpecies of kali [(b)]. The ſalt called *kelp*, prepared among ourſelves from different marine plants, contains an alkali of the ſame kind, but more impure.

The ſoda is much milder in taſte than the common vegetable alkalies, and is in ſeveral other reſpects alſo very conſiderably different from them, being of the ſame nature with the mineral alkali or baſis of ſea ſalt (ſee *Natron*). It promiſes to be an uſeful article of the materia medica, and has for ſome time paſt been received in practice in this country, as it has long been among the French, both by itſelf, and combined with tartar into the neutral ſalt called *ſal rupellenſe.* * The Edinburgh college have received a purified ſalt of this kind, under the title of *ſal alcalinus fixus foſſilis purificatus.*

(a) Expunged.

(b) Kali hiſpanicum ſupinum annuum ſedi foliis brevibus, *Mem. de l'acad. des ſcienc. de Paris, pour l'ann.* 1717. & *Pharm. Pariſ. p.* lxiv. *Salſola ſativa Linn.*

KERMES.

KERMES Pharm. Lond. Granum tinctorium & coccus baphica quibuſdam. Kermes: round reddiſh-brown grains, about the ſize of peas: found in Spain, Italy, and the ſouthern parts of France, adhering to the branches of the ſcarlet oak. Theſe grains appear, when freſh, full of minute reddiſh ova or animalcules, of which they are the nidus, and which in long keeping change to a browniſh red powdery ſubſtance. They are cured by ſprinkling with vinegar before exſiccation: this prevents the excluſion of the ova, and kills ſuch of the animals as are already hatched; which would otherwiſe become winged inſects, and leave the grain an empty huſk.

Confectio alkermes *Pharm. Lond.*

Fresh kermes yield upon expreſſion a red juice, of a light pleaſant ſmell, and a bitteriſh, ſubaſtringent, ſomewhat pungent taſte: this juice, or a ſyrup made from it, are brought from the ſouth of France, and ſometimes made uſe of as mild reſtringents and corroborants. An elegant cordial confection, for theſe intentions, is prepared in the ſhops, by diſſolving, in the heat of a water bath, ſix ounces of fine ſugar in ſix ounces by meaſure of damaſk roſe water, then adding three pounds of the juice of kermes warmed and ſtrained, and after the whole has grown cold, mixing in half a ſcruple of oil of cinnamon: this confection is taken from a ſcruple to a dram or more; either by itſelf, or in juleps, with which it mingles uniformly without injuring their tranſparency. The dried grains, if they have not been too long kept, give out, both to water, and to rectified ſpirit, the ſame deep red colour, and nearly the ſame kind of ſmell and taſte, with thoſe of the expreſſed juice. The watery tinctures loſe nearly all their ſmell in evaporation: the ſpirituous retain nearly the whole of their ſmell as well as of their taſte. The inſpiſſated extracts are conſiderably bitter, aſtringent, and of a kind of mild balſamic pungency: the ſpirituous is ſtronger and in ſomewhat ſmaller quantity than the watery, but the difference in ſtrength is more conſiderable than that of the quantity, ſpirit ſeeming to extract the active matter more completely than water.

KINO.

GUMMI rubrum aſtringens gambienſe D. Fothergill in *med. obſ. Lond.* 1757. *Kino, Pharm. Edinb.* Red aſtringent gum from Gambia; ſuppoſed to exude from inciſions made in the trunks of certain trees, called *pau de ſangue,* growing in the inland parts of Africa.

It is very friable, ſo as to be crumbled in pieces by the hands; of an opake dark reddiſh or almoſt black colour in the maſs, and when reduced to powder, of a deep brick red: ſmall particles of it, viewed with a magnifying glaſs, appear of a ſemitranſparent red like bits of garnet. In chewing, it firſt crumbles, then ſticks together a little, and in a ſhort time ſeems wholly to diſſolve, impreſſing a very conſiderable aſtringency accompanied with a ſlight ſweetiſhneſs. It has no ſmell.

To oils it gives little or no tincture. On a red-hot iron, it glows for a long time like a bit of burning charcoal, without ſhewing any diſpoſition to melt: it yields, during a little while, a ſlight dull flame hovering about the ſurface, and leaves at length a large proportion of greyiſh aſhes.

Both rectified ſpirit and water diſſolve, each, about two thirds of it, the ſpirit ſomewhat more than the water. Both ſolutions, when made with the ſame quantities of the two menſtrua, as twenty or thirty times the weight of the powdered gum, appear of the ſame deep bright red colour, the ſpirituous rather deepeſt: with ſolution of chalybeate vitriol, they both produce inky mixtures, from which the black matter ſpeedily concretes and ſettles to the bottom, leaving the liquors colourleſs *(a)*. The watery ſolution ſuffers no apparent change from the addition of alkalies fixt or volatile; but acids render it turbid, and occaſion a copious precipitation.

The part, which water leaves undiſſolved, ſeems as dark-coloured as the gum at firſt: it gives the ſame deep red tincture to ſpirit, and this tincture ſtrikes the ſame black with ſolution of vitriol. The part which

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(a) The black matter in theſe kinds of mixtures appears to conſiſt of the iron of the vitriol, diſengaged from its acid ſolvent, and combined with the vegetable aſtringent ſubſtance; the acid ſerving only as a neceſſary intermedium for procuring this union. The above black precipitates, after repeated ablutions with water, retained their blackneſs; and the clear liquors from which they had ſettled, being examined with alkaline ſalt on the principles to be mentioned hereafter under the article *ſales alkalini,* ſeemed to contain as much acid as the quantity of vitriol employed in them.

ſpirit leaves undiſſolved is much paler than the original gum, gives no tincture to water, and produces no change with the vitriolic ſolution.

It appears therefore that both the colouring and aſtringent matter are more completely taken up by ſpirit than by water; though water extracts readily enough a great ſhare of both.

Only a little quantity of this drug has hitherto been brought over. Dr. Fothergill, the firſt perſon, as far as I can find, who gave notice of it to the public, and who favoured me with the ſpecimens on which the above experiments were made, informs us, that he had the firſt intimation of it from a phyſician, who had met with good effects from it in obſtinate chronical diarrhœæ; and that a parcel was afterwards ſhewn to him, which had been received from a Guinea ſhip, and taken for a fine kind of dragons blood, which it pretty much reſembles in appearance, though in quality eſſentially different. He obſerves, that from the trials which have been made, and from its ſenſible qualities, it promiſes to be an article worth enquiring after, and to become in time a valuable addition to the materia medica. In diſorders from laxity and acrimony, it may, doubtleſs, be of great advantage; nor do I recollect any other drug, that is ſo much of a gummy nature, and at the ſame time ſo aſtringent. Terra japonica comes the neareſt to it, but is manifeſtly leſs aſtringent. The terra japonica differs likewiſe, in its watery ſolutions ſuffering no conſiderable ſeparation of their parts from the addition of acids; and in the black matter, which they produce with vitriol, being little diſpoſed to concrete and precipitate. Whether the cauſe, on which theſe kinds of diverſities depend, be ſufficient to influence alſo their medicinal powers, our knowledge, both in the chemical compoſition of bodies, and in the operation of medicines, is as yet too imperfect to permit us to judge. * The Edinburgh college have now received this gum as an officinal, and have directed a tincture, in which two ounces of it are diſſolved in a pound and a half of proof ſpirit.

Tinctura e Kino *Pharm. Edinb.*

LABDANUM.

LABDANUM Pharm. Lond. *Ladanum.* Labdanum: a reſinous juice, exuding upon the leaves of a ſmall ſhrub, *ciſtus ladanifera cretica flore purpureo Tourn.* *Ciſtus creticus Linn.* which grows plentifully

fully in Candy and ſome of the other iſlands of the Archipelago, and bears the winters of our own climate. The juice is ſaid to be collected, by lightly bruſhing the ſhrub, in the ſummer heats, with a kind of rake having ſeveral ſtraps or thongs of leather fixed to it inſtead of teeth*(a)*: the unctuous juice adheres to the thongs, and is afterwards ſcraped off with knives. The ſhrub is ſaid to be very plentiful alſo in Spain*(b)*, but it does not appear that any labdanum is brought from thence.

Two ſorts of labdanum are met with in the ſhops. The beſt, which is very rare, is in dark-coloured black maſſes, of the conſiſtence of a ſoft plaſter, growing ſtill ſofter on being handled: the other is in long rolls coiled up, much harder than the preceding, and not ſo dark. The firſt has commonly a ſmall, and the laſt a very large admixture of fine ſand, which, in the labdanum examined by the French academy, amounted to three fourths of the maſs. It is ſcarcely indeed to be collected pure, independently of deſigned abuſes; the duſt, blown on the plant by winds from the looſe ſands among which it grows, being retained by the tenacious juice.

LABDANUM has been ſometimes exhibited as a reſinous corroborant and reſtringent, but principally employed in external applications and perfumes: the ſoft kind makes an uſeful ingredient in the cephalic and ſtomachic plaſters of the ſhops. This ſort has an agreeable ſmell, and a lightly pungent bitteriſh taſte: the hard is much weaker, and the common means of purifying theſe kinds of ſubſtances, though they ſeparate the ſandy matter mixed with it, render it weaker ſtill. Rectified ſpirit of wine diſſolves nearly the whole of the pure labdanum into a gold-coloured liquor: on inſpiſſating the filtered ſolution, the finer part of the labdanum riſes with the ſpirit, and the remaining reſin proves both weaker and leſs agreeable than the juice at firſt. On infuſing the labdanum in water, it impregnates the liquor conſiderably with its ſmell and taſte: in diſtillation with water, there comes over a fragrant eſſential oil; and there remains in the ſtill a brittle almoſt inſipid reſin, with a pale coloured liquor, which, inſpiſſated, yields a weakly bitteriſh extract.

(a) Belon, *(Bellonius) Obſervations des choſes memorables trouvées en Grece, &c. l.* i. *c.* vii.

(b) Cluſius, *Rariorum ſtirpium per Hiſpanias obſervatarum hiſtoria, l.* i. *c.* v.

The ſpecific flavour of this juice ſeems to be ſooner diſſipated by heat than that of almoſt any of the other officinal reſins or gummy reſins.

LAC.

LAC; *lac aſininum, caprinum, muliebre, ovillum, vaccinum.* MILK: aſſes, goats, human, ſheeps, and cows milk: a fluid prepared and ſecreted in the bodies of animals, but not completely elaborated into an animal nature. On a chemical analyſis, it yields the ſame general principles with ſubſtances of the vegetable kingdom.

MILK is a mild nutritious balſamic fluid; when taken freely, an excellent obtunder of acrid and deleterious ſubſtances, and of over-doſes of the ſtronger cathartics and emetics; one of the beſt reſtoratives in emaciated habits; a palliative, whilſt its uſe is continued for the only aliment, in gouty caſes not inveterate, and in ſome rheumatic pains; the medicine principally depended on in hectics and conſumptions; prejudicial in acute diſeaſes, bilious fluxes and dyſenteries, ſwellings of the præcordia, and obſtructions of the abdominal viſcera.

It ſometimes happens, that when the body ſtands moſt in need of this medicinal nutriment, the inteſtines are too ſlippery to retain it. In ſuch caſes it may be advantageouſly boiled with gentle aſtringents, as granate peel, balauſtines, red roſes; about an equal quantity of water being added, by a little at a time as the milk boils up, ſo as that all the water may be waſted in the boiling *(a)*.

It may be preſumed that milk thickens in a ſound ſtomach, before its digeſtion, nearly in the ſame manner as it is thickened by the runnet or infuſion of the ſtomach of a calf; and that, where the gaſtric juices are too inert to produce this change, or ſo acid as to produce it in too great a degree and to ſeparate a firm curd from the ſerous part; the milk will be difficult of digeſtion. Debilities of the ſtomach are endeavoured to be corrected by the medication above mentioned, or by the interpoſition of proper ſtomachics; acidities, by the abſorbent earths. The abſorbent earths, however, are in this intention commonly inſufficient, unleſs aſſiſted by ſtomachics; for as they abſorb only the acid already generated,

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(a) Mead, *monita & præcepta medica, p.* 49.

and have no power of remedying the weakneſs or indiſpoſition which tends to produce more, they afford only a temporary and palliative relief: and indeed it may be queſtioned, whether they are capable of ſo far deſtroying the force, even of the acid they are mixed with, as to prevent its curdling milk in the ſtomach.

Milk is curdled by all acids; by moſt, perhaps by all, of the combinations of acids with earthy and metallic bodies; by alkaline ſalts both fixt and volatile; by ſome vegetables that have no acidity or alkaline quality, as muſtard ſeed; and by ſtrong vinous ſpirits. The concentrated acids produce a ſtrong curd immediately on mixture: moſt of the other ſubſtances ſcarcely have their full effect without a boiling heat. The coagulum made by acids falls to the bottom of the ſerum: that made with alkalies ſwims on the ſurface, forming, eſpecially if the alkali is of the volatile kind, a thick coriaceous ſkin. The ſerum, with alkalies, proves of a greeniſh hue: that made with the other ſubſtances is nearly of the ſame appearance with the whey which ſeparates ſpontaneouſly.

The perfect neutral ſalts, or thoſe compounded of an acid and an alkali, produce no coagulation, either with or without heat: ſome of them, particularly nitre and ſal ammoniac, make the milk leſs coagulable, and, if added to the boiling mixture when already curdled by vegetable acids, render nearly the whole fluid again *(a)*. Sugar retards the ſpontaneous coagulation, and impedes likewiſe the ſeparation of the creme from milk, and of the butyraceous part from creme. Lime-water and animal gall rediſſolve the coagula.

Milk, diſtilled with a gentle warmth, gives over a colourleſs and taſteleſs liquor, which ſeems to be mere water, but is found to differ from the ſimple element in growing ſour upon keeping. The reſiduum is a grumous, unctuous, yellowiſh or browniſh maſs; which, on being boiled in water, partially diſſolves. This ſolution contains the ſweet ſubſtance of the milk, freed from the groſſer unctuous caſeous matter; and proves an elegant whey, more agreeable in taſte, and which keeps better, than thoſe prepared in the common manner. Theſe ſorts of liquors are very uſeful, cooling, diluent, aperients and detergents; in hypochondriacal complaints, impurities of the humours, acute diſeaſes,

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(a) Willis, *Pharmaceutice rationalis, pars* i. *ſect.* iv. *cap.* i. §. 8.

&c. They promote the natural excretions in general, and remarkably increaſe the action of the purgative ſweets, caſia and manna. The ſaline matter of theſe liquors may be obtained in a pure ſolid cryſtalline ſtate, by clarifying the whey with whites of eggs, and, after due evaporation, ſetting it to ſhoot, in the ſame manner as other ſaline ſolutions.

Saccharum lactis *P. Par.*

Thus milk is reſolved into a watery fluid; a groſs ſubſtance indiſſoluble in water, which appears to contain the directly nutrimental part; and a ſweet aperient ſalt. The milks of different animals differ remarkably in the proportions of theſe ingredients, and in the quality of the ſalt.

Breaſt milk and aſſes milk are very nearly alike: twelve ounces leave on evaporation, according to Hoffman's experiments, eight drams of ſolid matter, of which boiling water diſſolves ſix drams: the ſolution, inſpiſſated or cryſtallized, yields a ſalt of a rich honey-like or ſaccharine ſweetneſs. The ſame quantity of cows milk leaves thirteen drams of ſolid matter, from which water extracts only about a dram and a half: the ſalt obtained from this ſolution is much leſs ſweet, when purified is almoſt inſipid, diſſolves very difficultly, and ſeems to have little claim to the pectoral and antiphthiſical virtues vulgarly aſcribed to it. All the other milks that have been examined are of an intermediate nature between the two firſt and the laſt: goats milk approaches more to that of the aſs than ſheeps milk does, though both of them come nearer to that of the cow than of the aſs.

There are conſiderable differences in the milk of one and the ſame animal according to its different aliment. Dioſcorides relates, that the milk of goats, which fed on the ſcammony plant and ſpurges, proved cathartic; and inſtances are given, in the *Acta Hafnienſia,* of bitter milk from the animal having eaten wormwood. It is a common obſervation, that cathartics, ſpirituous liquors, *&c.* taken by a nurſe, affect the child; that the milk of animals, feeding on green herbs, is more dilute than when they are fed on dry ones; and that many of the common plants, which are eaten by cattle, give a particular taſte to their milk. Hoffman is of opinion, that, on this principle, milk may be uſefully impregnated with the virtues of different medicinal ſubſtances.

LACCA.

LACCA Pharm. Edinb.(a) LAC, STICK-LAC, improperly called GUM-LAC: a concrete brittle ſubſtance, of a dark red colour; brought from the Eaſt Indies incruſtated on pieces of ſticks; internally divided into ſeveral cells; ſaid to be the reſinous juice of certain trees, collected by winged red inſects of the ant kind, impregnated with the tinging matter of the inſects, and by them depoſited either on the branches of the trees, or on ſticks faſtened in the earth for that purpoſe. In the cells are often obſerved ſmall red bodies, which appear to be the young inſects *(b)*.

* A curious account by Mr. Kerr of the inſect producing this gum, is contained in the *Philoſ. Tranſ.* Vol. LXXI. Part II. From this it appears, that theſe inſects are inhabitants of four trees; the *Ficus religioſa Linn.* the *Ficus Indica Linn.* the *Plaſo Hort. Malabar.* and the *Rhamnus Jujuba Linn.* The lac is however rarely found upon this laſt, and of an inferiour quality. The two ſpecies of *Ficus* yield a milky juice when wounded, which inſtantly coagulates into a viſcid ſubſtance. The *Plaſo* tree by inciſion gives out a red gum very ſimilar to the lac. Hence the inſect ſeems to have little trouble in animalizing the juices of theſe trees ſo as to make its cell, which is the ſtick-lac. It is found in very great quantities on the uncultivated mountains on both ſides the Ganges; and is of great uſe to the natives in various works of art, as varniſh, painting, dying, &c.

Seed lac *of the ſhops.*

Shell lac *of the ſhops.*

THE tinging red animal matter of the ſtick-lac diſſolves both in water and in rectified ſpirit, and appears to be of the ſame general nature with that of cochineal; like which it is made dull by alkalies, and brighter by acids, and turned to a ſcarlet by ſolution of tin. If the lac be broken in ſmall pieces, or grains, and infuſed in warm water, till it ceaſes to give any tincture to the liquor; the remainder appears of a tranſparent yellowiſh or browniſh colour, and, on raiſing the heat ſo as to make the water boil, melts and riſes to the ſurface. The grains, or the plates formed from them by liquefaction, thus robbed of great part of the

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(a) Expunged.

(b) See the *Memoires de l'acad. roy. des ſciences de Paris, pour l'ann.* 1714.

animal tincture, ſeem to be of an intermediate nature between that of wax and reſins, or to partake of the nature of both: they crumble on chewing, and do not ſoften or ſtick together again: laid on a red-hot iron, they inſtantly catch fire, and quickly burn off, with a ſtrong and not diſagreeable ſmell: diſtilled, they yield, like wax, an acid ſpirit and a butyraceous oil: alkaline lixivia, and volatile alkaline ſpirits, diſſolve them into a purpliſh liquor: they diſſolve alſo, by the aſſiſtance of heat, in rectified ſpirit of wine, and communicate to it a yellowiſh or browniſh red colour, an agreeable ſmell, and a bitteriſh, ſubaſtringent, not unpleaſant taſte. The lac in ſubſtance, whether entire, or freed from ſo much of its colouring matter as boiling water is capable of extracting, has no manifeſt taſte or ſmell.

A ſpirituous tincture of ſtick-lac has been ſometimes given as a mild reſtringent and corroborant in female weakneſſes, and in rheumatic and ſcorbutic diſorders. But the principal medicinal uſe of this concrete is as a topical corroborant and antiſeptic, in laxities and ſcorbutic bleedings and exulcerations of the gums: ſome employ for this purpoſe a tincture of the lac in alum water; others, a tincture made in vinous ſpirits impregnated with the pungent antiſcorbutics.

LACTUCA.

LETTUCE: a plant with ſlender but firm ſtalks, which yield, as do the leaves, a milky juice on being wounded: the flower conſiſts of a number of flat floſculi ſet in a ſmall ſcaly cup, followed by ſhort flat ſeeds, which are pointed at both ends and winged with down.

1. LACTUCA *Pharm. Edinb.* (a) *Lactuca ſativa C. B. & Linn.* Garden lettuce: with oblong, broad, rounded, uncut leaves; and numerous flowers ſtanding on long pedicles in the form of an umbel. It is annual, and raiſed at different times of the year in culinary gardens.

THE young leaves of the ſeveral ſpecies or varieties of garden lettuce are emollient, cooling, in ſome ſmall degree laxative and aperient, eaſy of digeſtion, but of little nouriſhment; ſalubrious in hot, bilious, in-

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(a) Expunged.

diſpoſitions;

diſpoſitions; leſs proper in cold phlegmatic temperaments. In ſome caſes, they tend to procure ſleep; not as being poſſeſſed of any ſtrictly hypnotic power; but by virtue of their refrigerating and demulcent quality. When the plant is grown up, it proves conſiderably bitter, though leſs ſo than moſt of the others of the lacteſcent kind, to which it is ſimilar in its general virtues.

The ſeeds, which in the common lettuce are of a grey or aſh colour, in the cabbage lettuce black, unite with water, by trituration, into an emulſion or milky liquor, which has nothing of the aperient bitterneſs of the milky juice of the leaves, and is nearly ſimilar to the emulſions made with almonds. The lettuce emulſions have been ſuppoſed to be more refrigerant than thoſe of the almond, and hence have ſometimes been preferred in heat of urine and other diſorders from acrimony or irritation.

2. LACTUCA SILVESTRIS *Medicorum.* *Lactuca ſilveſtris & Scariola Pharm. Pariſ.* *Lactuca ſilveſtris coſta ſpinoſa C. B.* *Lactuca Scariola Linn.* Wild lettuce: with the leaves cut almoſt to the rib into indented triangular ſegments; and the ſtalks and the ribs prickly. It is biennial, grows wild in hedges, and flowers in June.

This ſpecies is conſiderably bitterer than the garden lettuces, and more aperient and laxative. It is nearly ſimilar, in virtue as in taſte, to endive unblanched.

3. LACTUCA GRAVEOLENS: *lactuca ſilveſtris odore viroſo C. B.* *Lactuca viroſa Linn.* Strong ſcented lettuce, by ſome erroneouſly ſuppoſed to be the wild lettuce of medical writers: with the lower leaves entire, the upper jagged, the ſtalks and leaves prickly. It is biennial, found in hedges and by the ſides of ditches, and flowers in June.

This ſpecies differs greatly in quality from the two preceding, though reckoned by botaniſts to be only a variety of the ſecond. It ſmells ſtrongly of opium, and appears to partake, in no ſmall degree, of the virtues (a) of that narcotic drug. The opiate power of the lettuce, like that of the poppy-heads, reſides in its milky juice, but whether the milk of the lettuce is of equal ſafety, or its virtue preciſely of the ſame kind, with that of the poppy, is not known.

(a) Ray, *Hiſtoria plantarum*, i. 222. Boerhaave, *Hiſt. hort. Lugd. Bat. p.* 127.

* Dr. Collin of Vienna has written a tract recommending the uſe of this plant in the cure of dropſies. The preparation he employs, is an extract from the expreſſed juice, firſt ſufficiently clarified, and evaporated by a very gentle heat. He begins with ſmall doſes; but in dropſies of long ſtanding, originating from viſceral obſtructions, he riſes to the quantity of from one to three drams in twenty-four hours. He has conſtantly found it a mild remedy, agreeing perfectly with the ſtomach. It uſually kept the body open, but without exciting a purging. It ſeldom failed of proving powerfully diuretic, and at the ſame time mildly diaphoretic. The patients' thirſt is ſaid to have been totally extinguiſhed by its uſe; but at the ſame time we are told that they were allowed to drink freely of diluting liquors during the courſe. Dr. Collin aſſerts, that out of twenty-four dropſical caſes, all but one were cured by the uſe of this medicine; a degree of ſucceſs that certainly entitles it to the further notice of the faculty.

LAMIUM.

LAMIUM ALBUM Pharm. Lond. & Linn. Lamium album non fœtens folio oblongo C. B. Galeopſis & archangelica, & urtica mortua ſive alba Quibuſdam. WHITE ARCHANGEL or DEAD NETTLE: a plant with ſquare ſtalks; oblong indented acuminated leaves, like thoſe of the ſtinging nettle, ſet in pairs at the joints; and cluſters, in the boſoms of the leaves, of white labiated flowers, whoſe upper lip is entire, arched, and hairy, the lower lip cloven. It is perennial, common in hedges and about the borders of fields, and found in flower from April to near the end of ſummer.

INFUSIONS of this plant, drank as tea, are ſaid to be beneficial in uterine hemorrhagies and the fluor albus: the flowers are ſuppoſed to be more efficacious than the leaves, and hence thoſe only are directed by the college of London. The ſenſible qualities, either of the one or the other, afford little foundation to expect from them any conſiderable virtues. The flowers have only a ſlight mucilaginous ſweetiſhneſs, without any remarkable ſmell or flavour: the leaves have a weak not unpleaſant ſmell, and a ſmall degree of roughneſs, which may entitle them to a place among the milder corroborants.

LAMPSANA.

LAMPSANA, Lapſana, Napium, Papillaris herba. Soncho affinis lampſana domeſtica C. B. Lapſana communis Linn. DOCK CRESSES, NIPPLEWORT: a roughiſh plant; bearing ſmall yellow floſculous flowers, ſet in form of an umbel on the top of the ſtalk, followed by little crooked naked ſeeds: the lower leaves are deeply cut, towards the pedicle, into generally two or four oppoſite ſections; the upper are oblong, narrow, undivided, and have no pedicles. It is annual, grows wild by road ſides, and flowers greateſt part of the ſummer.

THIS is one of the bitter lacteſcent plants, nearly ſimilar in virtue to dandelion, endive, cichory, and the others of that claſs. It has been employed chiefly for external purpoſes, againſt wounds and ulcerations, particularly of the nipples, whence its names *nipplewort* and *papillaris.*

LAPATHUM.

DOCK: a perennial plant bearing numerous imperfect flowers ſet in double cups: the outermoſt cup conſiſts of three ſmall green leaves; the inner of three larger reddiſh ones, which become a covering to a gloſſy triangular ſeed.

1. OXYLAPATHUM *Pharm. Edinb.* (a) *Lapathum acutum folio plano C. B. Rumex acutus Linn.* Sharp-pointed wild dock: with long acuminated leaves, not curled about the edges, growing gradually narrower from the bottom to the point; and the ſeed-covers indented and marked with little tubercles. The roots are of a browniſh colour on the outſide, and of a yellowiſh within, which grows deeper in drying.

THE roots of the ſharp-pointed dock have a bitteriſh aſtringent taſte; and no remarkable ſmell: the roots of the other common wild docks are nearly of the ſame quality, equally diſcover their aſtringent matter both to the taſte and by ſtriking an inky blackneſs with ſolution of chalybeate vitriol, and have been often ſubſtituted in our markets to thoſe of the ſharp-pointed kind; which laſt are generally, and, ſo far as can be judged from their taſte, juſtly, accounted the moſt efficacious. They are ſuppoſed to have an aperient and laxative, as well as an aſtringent and corroborating virtue; approaching in this reſpect to rhubarb, but differing widely in degree, their ſtypticity being greater, and their purgative quality, if really they have any purgative quality at all, far leſs. They ſtand recommended in habitual coſtiveneſs, obſtructions of the viſcera, ſcorbutic and cutaneous maladies: in which laſt intention, fomentations, cataplaſms, or unguents of the roots, have been commonly joined to their internal uſe: in many caſes, the external application alone is ſaid to be ſufficient. Their active matter is taken up both by water and rectified ſpirit, and, on inſpiſſating the tinctures, remains in the extracts; both the watery and ſpirituous extracts are conſiderably bitter and very auſtere. A decoction of half an ounce or an ounce of the freſh roots, or of a dram or two of the dry roots, is commonly directed for a doſe.

(a) Expunged.

2. HYDROLAPATHUM *ſive Herba britannica Pharm. Edinb. Lapathum aquaticum folio cubitali C. B. Rumex aquaticus Linn.* Great wild water-dock: with very large leaves, two or three feet long; the ſeed-covers not indented. The roots are externally blackiſh, internally white with a faint reddiſh tinge, which, in drying, changes in ſome parts to a yellowiſh: the internal part of the freſh root, expoſed to the air, or of the dry root moiſtened, ſoon changes ſuperficially to a deep yellow or brown.

THE roots of the water-dock ſtrike a black colour with ſolution of chalybeate vitriol, like thoſe of the preceding ſpecies, but have a much ſtronger and more acerb taſte; which is diffuſed equally, ſo far as can be judged, through the whole ſubſtance of the root. They give out their active matter both to water and rectified ſpirit, and tinge both menſtrua of a pale yellowiſh or reddiſh brown colour, though in chewing they render the ſaliva only milky.

The *herba britannica* of the ancients, celebrated as an antiſcorbutic, and of which the knowledge was long loſt, was proved by Muntingius, towards the end of laſt century, to be no other than this great water-dock. Muntingius endeavours to prove alſo, that its name *britannica* was not derived from that of our iſland, but from Teutonic words expreſſing its power of faſtening looſe teeth, or of curing the diſeaſe which makes them looſe. Later experience has ſhewn, that it is a medicine of very conſiderable efficacy, both externally in lotions againſt putrid ſpongy gums and ulcerations, and as an internal antiſcorbutic: Boerhaave aſſures us, that in theſe caſes he has known many inſtances of its happy effects. It is ſuppoſed to be of ſervice alſo in cutaneous defedations different from the true ſcurvy, in rheumatic pains, and in chronical diſorders proceeding from obſtructions of the viſcera. It has been chiefly uſed in medicated wines and ſmall ales, with the addition generally of ſome ſpicy materials, and ſometimes of other antiſcorbutic plants, as ſcurvygraſs, buckbean, horſe-radiſh, *&c.*

3. RHABARBARUM MONACHORUM *Pharm. Pariſ. Lapathum hortenſe latifolium C. B. Hippolapathum; Patientia. Rumex Patientia Linn.* Monks rhubarb, garden patience: with large, broad, acuminated leaves; reddiſh, branched ſtalks; the leaves that cover the ſeeds unindented, and a tubercle on one of them: the root is of a yellow colour, with red veins, approaching in appearance to rhubarb.

THIS root is ſuppoſed to poſſeſs the virtues of rhubarb, in an inferiour degree. It is obviouſly more aſtringent than rhubarb: but comes very far ſhort of it in purgative virtue, though given, as uſually directed, in double its doſe; nauſeating the ſtomach, without producing any conſiderable evacuation. It communicates a deep yellow tincture both to water and ſpirit.

LAVENDULA.

LAVENDER: a ſhrubby plant, with its leaves ſet in pairs, the ſtalks ſquare when young, and round when grown woody; producing, on the tops of the branches, naked ſpikes of blue, ſometimes white, labiated flowers, of which the upper lip is erect and cloven, the lower divided into three roundiſh ſegments.

1. Lavendula *Pharm. Lond. & Edinb. Lavendula anguſtifolia C. B. Pſeudonardus quæ lavendula vulgo J. B. Lavendula minor ſive ſpica Ger. & Park. Lavandula Spica Linn.* Lavender: with oblong, very narrow, ſomewhat hoary, undivided leaves; a native of dry gravelly ſoils in the ſouthern parts of Europe, common in our gardens, and flowering in July.

The flowers of lavender have a fragrant ſmell, to moſt people agreeable, and a bitteriſh, warm, ſomewhat pungent taſte: the leaves are weaker and leſs grateful. They are often employed as a perfume; and medicinally, as mild ſtimulants and corroborants, in vertigoes, palſies, tremors, and other debilities of the nervous ſyſtem, both internally and externally.

The flowers are ſometimes taken in the form of conſerve; into which they are reduced, by beating them, while freſh, with thrice their weight of double refined ſugar. Their fragrance is leſs injured by beating or bruiſing them than moſt of the other odoriferous flowers, but is nevertheleſs conſiderably diminiſhed: the flavour of the leaves is of a much leſs deſtructible kind.

Conſerva florum lavendulæ *Ph. L.*

Water extracts by infuſion nearly all the virtue both of the leaves and flowers. In diſtillation with water, the leaves yield a very ſmall portion of eſſential oil; the flowers a much larger, amounting, in their moſt perfect ſtate, when they are ready to fall off ſpontaneouſly and the ſeeds begin to ſhew themſelves, to about one ounce from ſixty. The oil is of a bright yellowiſh colour, a very pungent taſte, and poſſeſſes, if carefully diſtilled, the fragrance of the lavender in perfection: it is given internally from one drop to five, and employed in external applications for ſtimulating paralytic limbs and for deſtroying cutaneous inſects. The decoction, remaining after the diſtillation of the oil, is diſagreeably bitteriſh and ſomewhat ſaline.

Ol. eſſentiale flor. lavend. *Ph. L. & Ed.*

Rectified ſpirit extracts the virtue of lavender more completely than water. The ſpirit elevates alſo in diſtillation a conſiderable part of the odoriferous matter of the leaves, and greateſt part of that of the flowers; leaving, in the inſpiſſated extracts, a moderate pungency and bitteriſhneſs with very little ſmell. A ſpirit prepared by pouring a gallon of proof ſpirit on a pound and a half of the freſh-gathered flowers, and drawing off five pints by the heat of a water bath; or by adding eight pounds of rectified ſpirit to two of the flowers, and drawing off ſeven pounds, is

Spiritus lavend. ſimpl. *Pharm. Lond.*

Pharm. Edin.

richly impregnated with the fragrance of the flowers. More compounded ſpirits of this kind, in which other aromatics are joined to the lavender, have been diſtinguiſhed by the name of Engliſh or palſy drops: the college of London directs three pints of the ſimple ſpirit of lavender, and one pint of ſpirit of roſemary, to be digeſted on half an ounce of cinnamon, half an ounce of nutmegs, and three drams of red ſaunders as a colouring ingredient: the college of Edinburgh, to the ſame quantity of both ſpirits, orders one ounce of cinnamon, two drams of cloves, half an ounce of nutmegs, and three drams of red ſaunders. Theſe preparations are taken internally, on ſugar or in any convenient vehicle, from ten to an hundred drops, and uſed externally in embrocations, *&c.*

Spiritus lavend. comp. *Pharm. Lond.*

Spirit. lavend. comp. *Pharm. Edin.*

2. Lavendula latifolia *C. B. Lavendula major ſeu ſpica Pharm. Pariſ. Pſeudonardus quæ vulgo ſpica J. B. Lavendula major ſive vulgaris Park.* Broad lavender: with longer, broader, and hoarier leaves, leſs numerous on the ſtalks and branches; and much larger ſpikes, though ſmaller flowers; common in the ſouthern parts of Europe, but rare among us. The name ſpike is applied by foreign writers to this ſpecies, by ſome of ours to the firſt. Linnæus makes this only a variety of the former.

The broad-leaved lavender is ſtronger both in ſmell and taſte than the narrow, and yields in diſtillation almoſt thrice as much eſſential oil, but the flavour both of the oil and of the plant itſelf, is much leſs grateful: the oil is likewiſe of a much darker colour, inclining to green. Watery and ſpirituous extracts, made from the two ſorts of lavender, are very nearly alike; the difference ſeeming to reſide only in the volatile parts.

LAUROCERASUS.

LAUROCERASUS Pharm. Pariſ. Ceraſus folio laurino C. B. Prunus Lauro-ceraſus Linn. Laurel, Cherry-bay: an evergreen tree or ſhrub, with large, thick, oblong, gloſſy leaves, pointed at both ends, and ſlightly indented: towards the tops of the branches come forth pentapetalous flowers, in five-leaved cups, followed by cluſters of berries, like cherries or damſons. It is cultivated in gardens, flowers in May, and ripens its fruit in Auguſt or September.

THE leaves of the laurocerafus have a bitter taſte, accompanied with a flavour reſembling that of the kernels of certain fruits, as thoſe of black cherries, apricots, bitter almonds, *&c.* Like thoſe kernels, they communicate an agreeable flavour both to watery and ſpirituous liquors, by diſtillation and by infuſion; and, like them alſo, they appear from ſome late trials to be poiſonous. A diſtilled water, ſtrongly impregnated with their flavour, given in the quantity of four ounces to a large maſtiff dog, occaſioned in a few minutes terrible convulſions, and within an hour put an end to his life: dogs have been killed alſo, in a few minutes, by ſmaller quantities, of the diſtilled water, of an infuſion of the leaves in water, and of their expreſſed juice, taken into the ſtomach, or injected by the anus; and there are ſome inſtances of liquors flavoured with the diſtilled water being poiſonous to human ſubjects. The diſſections of dogs killed by this poiſon have ſhewn no other morbid appearances, or alterations, than ſuch as may be reaſonably ſuppoſed the immediate effect of the convulſions: when the diſtilled water, or the leaves in ſubſtance, were given in ſuch ſmall quantities as not to kill, and continued for ſome time, the pulſe became quicker, and the blood more fluid, and of a more florid red colour *(a)*. It is ſaid that infuſions of the leaves (made probably very weak) are commonly uſed in Holland in diſorders of the lungs *(b)*.

The kernel of the fruit is of the ſame nature with the leaves. The pulpy part diſcovers no ill quality to the palate, is coveted by birds, and appears to be innocent.

LAURUS.

LAURUS Pharm. Lond. & Edinb. Laurus vulgaris C. B. Laurus nobilis Linn. BAY: an evergreen tree or ſhrub, with oblong, ſtiff, ſmooth leaves, pointed at both ends, pale yellowiſh, monopetalous flowers, divided into four ſections; and oblong dry berries, containing, under a thin black ſkin, a horny ſhell, within which are lodged two dark browniſh ſeeds joined together. It is a native of the ſouthern parts of Europe, and not uncommon in our gardens: it flowers in April and May, and

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(a) See Dr. Langriſh's *experiments on brutes,* and No. 418 and 420 of the *philoſophical tranſactions.*

(b) Linnæi *Amænitat. academic.* iv. 40. i. 409.

ripens its berries in September. The ſhops have been commonly ſupplied with the berries from the Streights.

The leaves of the bay have a light agreeable ſmell, and a weak aromatic roughiſh taſte: in diſtillation with water they yield a ſmall quantity of a very fragrant eſſential oil: with rectified ſpirit they afford a moderately warm pungent extract. The berries are ſtronger both in ſmell and taſte than the leaves, and yield a larger quantity of eſſential oil: they diſcover likewiſe a degree of unctuoſity in the mouth, give out to the preſs an almoſt inſipid fluid oil, and on being boiled in water a thicker butyraceous one, of a yellowiſh green colour, impregnated with the flavour of the berry.

Oleum expreſſum baccarum lauri *Pharm. Edin.*

The leaves and berries of the bay are accounted ſtomachic, carminative, and uterine: in theſe intentions, infuſions of the leaves are ſometimes drank as tea; and the eſſential oil of the berries given, on ſugar or diſſolved by means of mucilages or in ſpirit of wine, from one to five or ſix drops. The principal uſe of theſe ſimples in the preſent practice is external: they are made ingredients in carminative glyſters, warm cataplaſms, and uterine baths; and the butyraceous oil of the berries ſerve as a baſis for ſome nervine liniments, and mercurial and ſulphureous unguents.

LAZULI LAPIS.

LAZULI LAPIS Pharm. Edinb. (a) *Lapis cæruleus*; *Lapis cyanus*; *Cæruleum nativum.* LAPIS LAZULI: a compact ponderous foſſil; leſs hard than flint; of a deep blue colour, variegated commonly with gold or ſilver coloured points or veins; retaining its colour in a moderately ſtrong fire, in a very ſtrong one calcining to a brown, and at length melting into a duſky coloured glaſs with blueiſh clouds; loſing its colour, and in great part diſſolving, by digeſtion in mineral acids; ſaid to be found in the mines of gold, ſilver, and copper, in the eaſtern countries and in ſome parts of Germany (b).

This ſtone, levigated into an impalpable powder, and freed from the groſſer parts by waſhing with water, has been given in doſes of half

(a) Expunged.

(b) See Cronſtedt's *mineral ſyſtem, and* Marggraf's *chemical works.*

a dram and a dram, and ſaid to operate ſtrongly by ſtool and vomit. Some have recommended it in epilepſies and intermitting fevers: Dolæus tells us, that in this laſt diſorder, the above doſes, taken on the approach of a fit, with two or three ſpoonfuls of brandy, were with him a ſingular ſecret. The ancients ſuppoſed, that it evacuates chiefly what they called melancholic humours or aduſt black bile, probably, as Geoffroy ſuſpects, on account of its tinging the feces black; a property, from which it may rather be preſumed that the mineral participates of iron. The conſtringing power, which is likewiſe aſcribed to it, depends perhaps on this ingredient; but neither its real medical qualities, nor its chemical compoſition, are as yet known. Its ferrugineous impregnation is apparent, from its yielding yellow martial flowers on ſublimation with ſal ammoniac, and from ſolutions of it in mineral acids affording a blue precipitate with the tincture of Pruſſian blue deſcribed under the article *ferrum*. It has been generally ſuppoſed to participate pretty largely of copper; but pure lapis lazuli gives no mark of copper; and thoſe, who ſpeak of experiments diſcovering that metal in it *(a)*, have probably taken for lapis lazuli ſome other blue ſtones, as the lapis armenus, which plainly contains copper, and which ſome celebrated naturaliſts have ranked as a ſpecies of the lazuli. The lapis armenus may be readily diſtinguiſhed, by its being leſs hard than the lazuli, ſoon loſing its blue colour in moderate fire, and raiſing an effervefcence with acids, its baſis ſeeming to be a calcareous earth.

LENTISCUS.

LENTISCUS Ph. Edinb. (b) Lentiſcus vulgaris C.B. Lentiſcus verus ex inſula chio cortice & foliis fuſcis Commel. Piſtachia Lentiſcus Linn. LENTISK or MASTICH TREE: an evergreen tree or ſhrub, with ſoft flexible branches hanging downwards, and ſmall ſtiff leaves, pointed at both ends, ſet in pairs on a furrowed rib, which terminates in a ſoft prickle: ſome trees produce reddiſh imperfect flowers, in the boſoms of the leaves; others, cluſters of black firm berries including a whitiſh kernel. It is a native of the ſouthern parts of Europe, and bears the ordinary winters of our own climate: large plantations of it are culti-

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(a) Hoffman, *in notis ad Poterium, p.* 628.

(b) Expunged.

vated in the iſland of Chio, on account of the reſinous juice, called maſtich, obtained from inciſions made in the trunk. The wood is ſometimes brought to us from Marſeilles, in thick knotty pieces, covered with a browniſh bark, internally of a whitiſh or pale yellowiſh colour.

THIS wood is accounted a mild balſamic reſtringent: infuſions and decoctions of it are greatly commended, in the German ephemerides, againſt catarrhs, nauſeæ, weakneſs of the ſtomach, and in general as a corroborant and an alterative or ſweetener*(a)*. It may indeed be preſumed, from its ſenſible qualities, to poſſeſs virtues of this kind, though in no very high degree. Its ſmell and taſte are aromatic and reſinous, but very weak: the ſmall tough ſprigs are ſtronger than the larger pieces, and the bark than the wood. It impregnates water with a red colour, and a light agreeable ſmell: to rectified ſpirit it gives a bright yellow tincture, and ſcarce any ſmell. On gently diſtilling off the menſtrua from the filtered liquors, the remaining extracts prove reſinous, ſubaſtringent, and ſlightly pungent: the watery extract diſcovers more of the flavour of the wood, and is in taſte rather ſtronger, though much larger in quantity, than the ſpirituous; the ſpirit covering or ſuppreſſing the ſmell, and not taking up enough of the gummy or mucilaginous matter to render the reſin diſſoluble in the mouth. According to Cartheuſer's experiments, the watery extract amounts to one eighth the weight of the wood, the ſpirituous to one twentieth or one ſixteenth.

LEPIDIUM.

LEPIDIUM: a plant with undivided leaves, and ſmall tetrapetalous white flowers on the tops of the ſtalks and branches, followed by little ſhort heart-ſhaped ſharp-pointed pods, which are divided longitudinally into two cells full of minute ſeeds.

1. LEPIDIUM *Pharm. Edinb.(b)* *Lepidium latifolium C. B. & Linn. Piperitis. Raphanus ſylveſtris Belgis & Gallis.* DITTANDER, PEPPERWORT, POOR-MANS-PEPPER: with oblong, broad, acuminated,

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(a) Weack, *Acta nat. curioſ. dec.* iii. *ann.* ix & x. *p.* 254.

(b) Expunged.

ſerrated leaves. It is perennial, and found wild in ſome parts of England by the ſides of rivers and in other moiſt ſhady places.

2. Iberis, *ſeu Cardamantica: Iberis latiore folio C. B. Lepidium gramineo folio ſive iberis Tourn. Lepidium Iberis Linn.* Sciatica creſſes: with long narrow leaves, the lower on long pedicles and ſerrated; the upper entire, without pedicles. It is annual; a native of the ſouthern parts of Europe; and raiſed in our gardens, as the preceding, for culinary uſe.

These herbs, when freſh, have a quick penetrating pungent taſte; which is in great part diſſipated or deſtroyed by exſiccation, retained in the expreſſed juice, extracted by water and by rectified ſpirit, and elevated by both menſtrua in diſtillation or evaporation. They are recommended as antiſeptics, ſtomachics, attenuants, and aperients; and appear to be of the ſame general nature with the *cochleariæ*, *naſturtium*, and other acrid antiſcorbutics. The ſecond ſort has been ſuppoſed particularly ſerviceable, externally, againſt the ſciatica; whence its common Engliſh name.

LEVISTICUM.

LEVISTICUM ſeu Liguſticum, Pharm. Edinb. Liguſticum vulgare C. B. Angelica montana perennis paludapii folio Tourn. Liguſticum Leviſticum Linn. Lovage: a tall umbelliferous plant, with large leaves divided and ſubdivided into ſections like thoſe of ſmallage: the umbels ſtand on ſhort pedicles, with ſeveral little leaves at the origin of each of the primary ones, and a few at the ramifications; the ſeeds are of a pale brown colour, oblong, plano-convex, marked with five longitudinal ridges: the root thick, fleſhy, juicy, branched, of a dark browniſh colour on the outſide, and a whitiſh or pale yellowiſh within. It is a native of the ſouthern parts of Europe, and raiſed with us in gardens: it is perennial, flowers in June, and ripens its ſeeds in Auguſt.

All the parts of this plant are of the aromatic kind; of a ſtrong flavour, ſomewhat like that of angelica, but leſs agreeable; ſuppoſed particularly uſeful in female diſorders. The leaves, which have been generally made choice of in this intention, have the moſt unpleaſant ſmell, and ſuffer no great loſs of it in keeping for ſome months; their taſte is moderately warm, and acrid, and very durable in the mouth and throat. The root, whoſe ſmell is nearly of the ſame kind with that of the leaves, though more approaching to gratefulneſs, diſcovers to the taſte a conſiderable ſweetneſs joined to its mild aromatic warmth; an extract made from it by water retains little more than the ſweet matter; the flavour exhaling in the inſpiſſation, and impregnating the diſtilled fluid, from which, if the quantity of the root ſubjected to the operation be large, a ſmall portion of eſſential oil ſeparates: an extract made by rectified ſpirit retains the aromatic part as well as the ſweet, and proves moderately warm, but much leſs ſo than the extract of angelica: towards the end of the inſpiſſation of the ſpirituous tincture, a thin unctuous matter appears upon the ſurface, in taſte highly aromatic, and which ſeems to be the part that gives activity to the reſt of the maſs. The ſeeds of the plant have little of the ſweetneſs of the roots, but are rather of more warmth and pungency, and of a more agreeable flavour.

LICHEN.

LIVERWORT: a kind of imperfect vegetable production, conſiſting of ſpreading leaves, of a leathery cruſtaceous matter. A ſort of flowers both male and female have been diſcovered in it, the latter producing innumerable ſeeds, like meal.

LICHEN CINEREUS TERRESTRIS *Pharm. Lond.* *Lichen terreſtris cinereus Raii.* *Lichen caninus Linn.* Aſh-coloured ground liverwort: conſiſting of roundiſh pretty thick leaves, divided about the edges into obtuſe ſegments, flat above, of a reticular texture underneath, faſtened to the earth by ſmall fibres; when in perfection, of an aſh grey colour; by age turning darker coloured or reddiſh. It grows on commons and open heaths, ſpreads quickly on the ground, and is to be met with at all times of the year, but is ſuppoſed to be in its greateſt vigour about the end of autumn.

THIS herb is ſaid to be a warm diuretic. It is particularly celebrated as a preſervative againſt the terrible conſequences of the bite of a mad dog: an account of the remarkable efficacy, in this intention, of a powder compoſed of the dry leaves and black pepper, was communicated to the royal ſociety by Mr. Dampier, and publiſhed in No. 237 of the Philoſophical Tranſactions. This powder was afterwards inſerted, in the year 1721, into the London pharmacopœia, at the deſire of Dr. Mead, who had large experience of its good effects, and who declares, that he had never known it to fail, where it had been uſed, with the aſſiſtance of cold bathing, before the hydrophobia began. He directs a dram and a half of the powder to be taken in the morning faſting, in half a pint of cows milk warm, for four mornings ſucceſſively: previouſly to theſe four doſes, the patient is to be blooded nine or ten ounces; and after them, to be dipt in cold water every morning faſting for a month, and then dipt thrice a week for a fortnight longer (a). The powder was originally compoſed of equal parts of the lichen and pepper: but this quantity of pepper rendering the medicine too hot, only one part is now uſed to two of the lichen.

Pulvis antilyſſus *Pharm. Lond.*

If cold bathing, bleeding, black pepper, and lichen, conjointly, be really of ſufficient efficacy againſt the poiſon of the mad dog, it will not perhaps follow that any ſhare of this efficacy belongs to the lichen: and indeed greater ſtreſs has been laid in general on the cold bath, than on this or the other parts of the preſcription. The lichen does not promiſe to have any valuable medicinal power: to the organs of taſte or ſmell it diſcovers no activity: taken by itſelf, in double the quantity above preſcribed, it did not appear to have any ſenſible operation. Digeſted in rectified ſpirit, it tinged the menſtruum of a deep yellowiſh green colour: on diſtilling off the ſpirit from the filtered tincture, the remaining grumous extract had very little taſte, and amounted only to twenty-ſix grains from two ounces, or about one thirty-ſeventh of the weight of the lichen. A decoction of the herb in water was browniſh, and of a faint ſmell, ſomewhat like that of muſhrooms: the extract, obtained by inſpiſſating it, weighed one eighth of the lichen, and had ſome taſte, but ſo little, that it is hard to ſay of what kind.

*LICHEN ISLANDICUS *Linn.* *Lichen Pharm. Edinb.* *Lichen terreſtris, foliis Eryngii, Buxb. Cent.* II. *Lichenoides rigidum, Eryngii folia referens, Raii & Dillen.* Eryngo-leaved, or eatable Iceland, liverwort. This ſpecies of lichen conſiſts of nearly erect leaves, ſtiff when dry, but ſoft and pliant when moiſt, irregularly divided into broad diſtant ſegments, ſmooth, and ciliated at the margins. It grows in the mountainous parts of this country, and in various other parts of Europe.

(a) *Mechanical account of poiſons, eſſay* iii.

The Iceland lichen infuſed in water gives a bitteriſh liquor, which is reddened by a mixture of martial vitriol. A decoction of it is very thick and viſcid; and on cooling concretes into a ſtrong gelly. An ounce of the lichen boiled for a quarter of an hour in a pound of water, and afterwards ſtrained, yielded ſeven ounces of a mucilage as thick as that procured by the ſolution of one part of gum-arabic in three of water.

The inhabitants of Iceland make great uſe of this lichen both as food and as phyſic. When freſh, according to Borrichius *(a)*, it is employed as a purgative; but Olafsen *(b)* decries that it has any more than a very gently opening quality. It is uſually dried and ground into a meal, with which they make pottage and other preparations, adding either water or milk, and find it an agreeable and very nutritive article of food. It is beſt firſt to ſteep it for a ſufficient time in water, in order to extract the bitterneſs.

The prepared lichen has been much uſed of late, particularly at Vienna, as a remedy for conſumptive diſorders. The celebrated Scopoli *(c)* has publiſhed ſome caſes of its ſucceſsful exhibition in the phthiſis; and other practitioners *(d)* have confirmed his account. It is uſed boiled in milk to a kind of pottage, of which the patient's diet is chiefly to conſiſt. It is ſaid to be antiſeptic, eaſy of digeſtion, and remarkably nouriſhing. It is alſo recommended in other caſes, where the ſtomach is ſo weak that common aliments are rejected. The Edinburgh college have received this lichen into their catalogue of ſimples.

LIGNUM ALOES.

LIGNUM ALOES, Xyloaloes, & Agallochum, Pharm. Pariſ. Lignum Calambac. AGALLOCHUM, CALAMBAC, or ALOES WOOD: a wood brought from China, and the inner parts of Tartary, in ſmall pieces, compact and ponderous, of a yellowiſh or ruſty brown colour, with black or purpliſh veins, ſometimes purple with aſh-coloured veins, and ſometimes all over blackiſh. Of its origin, we have no very ſatisfactory account: moſt of the writers, to whom we are indebted for information about the productions of thoſe countries, report, that it is the internal part of certain trees; that a large tree affords only a very ſmall quantity of this valuable part; and that there are ſeveral different ſorts of it, of which the beſt is never brought to us, being ſold in China itſelf for twice or thrice its weight of ſilver.

(a) *Bartholini Act. med. Hafn.* 1671.

(b) *Journey to Iceland.*

(c) *Annus* 2. *hiſtorico-natural. p.* 114.

(d) Bergius, *mat. med.* 858.

The beſt ſort of agallochum wood brought into Europe, has a bitteriſh reſinous taſte, and a light aromatic ſmell. Set on fire, it ſeems to melt like wax, and emits, during the burning, an agreeable fragrance, which continues till the wood is wholly conſumed. It is this fragrance in burning which makes the wood precious in the eaſtern countries for fumigations, and which affords the ſureſt criterion of its genuineneſs and goodneſs. As this wood is apparently very reſinous, rectified ſpirit takes up more from it than watery menſtrua: according to Cartheuſer's experiments, an ounce yields with ſpirit three drams of extract, and with water only two. The watery decoction and extract are moderately bitter and ſubacrid. The ſpirituous make leſs impreſſion on the organs of taſte, being leſs diſſoluble in the mouth, or leſs miſcible with the ſaliva: the pure reſin, obtained by precipitation with water from the ſomewhat inſpiſſated ſpirituous tincture, as directed by the faculty of Paris, is ſtill weaker in taſte. Hoffman obſerves, that in diſtillation with water, it yields an eſſential oil, of a whitiſh colour, of a thick conſiſtence, of great fragrance, but in ſmall quantity, not exceeding half an ounce from one hundred and ſixty ounces of the wood: this oil, in which the more valuable parts of the agallochum are concentrated, he recommends, diſſolved in ſpirit of wine, as one of the beſt cordials and corroborants, in weakneſſes of the ſtomach and depreſſions of ſtrength *(a)*.

Reſina ligni aloes *Pharm. Pariſ.*

In our ſhops, we rarely meet with any agallochum that anſwers the above characters. In its place have been ſubſtituted woods of an inferiour kind, probably the *aſpalathus*, *lignum aquilæ*, and *calambour* of authors; which are ſaid to be woods of the nature of agallochum, but, when in their greateſt perfection, far weaker.

(a) Obſerv. phyſico-chym. lib. i. *obſ.* 4. *Not. ad Poterium, p.* 487. *De medicament. balſamic.* §. 15.

LIGNUM CAMPECHENSE.

LIGNUM CAMPECHENSE Pharm. Edinb. Lignum tinctile campechenſe Pharm. Lond. Lignum campeſcanum & lignum indicum Mont. exot. Lignum campechianum, ſpecies quædam braſil Sloan. Lignum ſappan quibuſdam. CAMPEACHY WOOD or LOGWOOD: the wood of a prickly pod-bearing tree *(Hæmatoxylum Campechianum Linn.)* a native of Campeachy, in the bay of Honduras; from whence the wood is brought over in large compact hard logs of a red colour.

THIS wood, imported from America as a dying drug, has of late been introduced into medicine, and found to be a very uſeful reſtringent and corroborant, in diarrhœas, dyſenteries, and other diſorders from a laxity of the ſolids. It has a ſweetiſh ſubaſtringent taſte, and no remarkable ſmell: extracts made from it, by water and ſpirit, have a great degree of ſweetneſs, mixed with a mild grateful aſtringency. It gives a deep purpliſh red tincture both to watery and ſpirituous menſtrua*[(a)]; and frequently tinges the ſtools, and ſometimes the urine, of the ſame colour: of this the patient ought to be appriſed, that he may not be alarmed by judging the colour of the diſcharge to be owing to blood.

Watery menſtrua readily extract part of the virtue of this wood, but are very difficultly made to take up the whole. To promote the extraction, the wood ſhould previouſly be reduced into fine powder, which is to be ſtrongly boiled in the water, in the proportion, for example, of a pound to a gallon, till half the liquor is waſted: the powder will ſtill give a conſiderable impregnation to the ſame quantity of freſh water, and this repeatedly for four or five times or oftener: the extract obtained by inſpiſſating the decoctions, of a dark blackiſh colour in the maſs, tinges water of a fine red, like that of the liquors before inſpiſſation, but does not totally diſſolve: it is given in doſes of from ten grains to a ſcruple and upwards. Rectified ſpirit takes up more from the logwood than watery menſtrua. Some digeſt the powdered wood in four times its weight of ſpirit, and afterwards boil it in water: the matters taken up by

Extract. lign. campechenſ. *Phar. Lond.*

Phar. Edinb.

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*(a) Pure rain water acquires only a deep orange or mahogany colour from logwood; and rectified ſpirit a fine yellowiſh red. The purple hue ſeems to be communicated by ſome extraneous ſaline matter, as the ſelenitic or aluminous ſalts in hard ſpring water. A very ſmall quantity of fixed alkali will alſo give it ſtill more perceptibly.

by the two menſtrua are then united into one extract, by inſpiſſating the watery decoction to the conſiſtence of honey, and then gradually ſtirring in the inſpiſſated ſpirituous tincture.

LIGNUM RHODIUM.

LIGNUM RHODIUM Pharm Lond. RHODIUM or ROSEWOOD: the wood or root of a tree of which we have no certain account; brought from the Canary iſlands, in long crooked pieces, full of knots, externally of a whitiſh colour, internally of a deep yellow, with a reddiſh caſt. The largeſt, ſmootheſt, ſtraighteſt, heavieſt, and deepeſt coloured pieces ſhould be choſen; and the ſmall, thin, pale, light ones rejected.

THIS wood has a ſlightly bitteriſh, ſomewhat pungent, balſamic taſte, and a fragrant ſmell, eſpecially when ſcraped or rubbed, reſembling that of roſes. Digeſted in rectified ſpirit, it gives out pretty readily the whole of its active matter, and tinges the menſtruum of a reddiſh yellow colour: on committing to diſtillation the filtered tincture, the ſpirit brings over little or nothing of its flavour; the fine ſmell, as well as the balſamic pungency, of the rhodium, remaining nearly entire in the inſpiſſated extract, which proves tenacious and adheſive like the turpentines. Infuſed in water, it gives out likewiſe great part of its ſmell and taſte, together with a bright yellow colour: in evaporation, the water carries off the ſpecific flavour of the wood, leaving in the extract only a ſlight pungency and bitteriſhneſs. Diſtilled with water, it gives over, ſomewhat difficultly and ſlowly, a highly odoriferous eſſential oil, at firſt of a gold colour, by age turning reddiſh, amounting, if the rhodium is of a good kind, to about one ounce from fifty: the diſtilled water is likewiſe agreeably impregnated with the fragrance of the rhodium, and reſembles that of damaſk roſes.

Oleum ligni rhodii *Phar. Lond.*

The eſſential oil is uſed as a perfume, for ſcenting pomatums, *&c.* and in this light only the rhodium wood is generally regarded. It promiſes, however, to be applicable to more important purpoſes, and bids fair to prove a valuable cordial and corroborant.

LILIUM.

LILIUM ALBUM Pharm. Edinb. *Lilium album flore erecto & vulgare C. B.* *Lilium candidum Linn.* WHITE LILY: a plant with a ſingle ſtraight round ſtalk, clothed with oblong, acuminated, thick, ſmooth, pale green, ribbed leaves, which have no pedicles; bearing on the top ſeveral elegant, naked, white, upright, hexapetalous, bell-ſhaped flowers, which open ſucceſſively, and are followed each by an oblong triangular capſule, divided into three cells full of browniſh ſeeds: the root is a ſingle bulb, compoſed of fleſhy ſcales, with ſeveral fibres at the bottom. It is perennial, a native of Syria and Paleſtine, common in our gardens, and flowers in June.

THE flowers of the white lily have a pleaſant ſweet ſmell, and a ſlightly mucilaginous taſte. Their odorous matter is of a very volatile kind, being totally diſſipated in drying, and totally carried off in evaporation by rectified ſpirit as well as water: both menſtrua become agreeably impregnated with it by infuſion or diſtillation, but no eſſential oil has been obtained, though many pounds of the flowers were ſubmitted to the operation at once. The principal uſe of theſe flowers is for flavouring expreſſed oils; which, by inſolation with freſh parcels of them continued about three days each time, are ſuppoſed to receive from them, along with their ſmell, an anodyne and nervine virtue. The diſtilled water has been ſometimes employed as a coſmetic.

Oleum liliorum, ſuſinum, *&c.*

The roots alſo have been uſed chiefly for external purpoſes; as an ingredient in emollient and ſuppurating cataplaſms: they abound with a ſtrong mucilage, and do not ſeem to have much active matter beſides. Gerard indeed relates, that ſeveral perſons were cured of dropſies, by the conſtant uſe, for a month or ſix weeks, of bread made of barley-meal with the juice of white lily roots: but there are examples of ſimilar cures being obtained by the uſe of common dry bread; and probably in one caſe, as well as in the other, abſtinence from liquids was the remedy.

LILIUM CONVALLIUM.

LILIUM CONVALLIUM Pharm. Edinb.(a) *Lilium convallium album C. B. Convallaria, Maianthemum. Convallaria maialis Linn.* LILY OF THE VALLEY, MAY LILY: a plant with two or three oblong, acuminated, ribbed leaves; in the boſoms of which ariſes a naked ſtalk bearing a number of ſmall, naked, white, drooping, bell-ſhaped, monopetalous flowers, cut about the edges into ſix ſegments, and followed by red berries: the roots are long, ſlender, and white. It is perennial, grows wild in woods and ſhady places, and flowers in May.

THE flowers of this plant have a fragrant delightful ſmell, and a penetrating bitteriſh taſte; both which they readily impart to watery and to ſpirituous menſtrua. Their odorous matter, like that of the white lily, is very volatile; being totally diſſipated in exſiccation, and elevated in diſtillation both by water and rectified ſpirit: there is no appearance of eſſential oil in either diſtillation; nor does the diſtilled ſpirit turn milky on the admixture of water, as thoſe ſpirits do, which are impregnated with actual oil. The pungency and bitterneſs, on the other hand, reſide in a fixt matter, which remains entire both in the watery and ſpirituous extracts, and which, in this concentrated ſtate, approaches, as Cartheuſer obſerves, to hepatic aloes.

It is principally from the volatile parts of theſe flowers, that medicinal virtues have been expected, in nervous and catarrhous diſorders; but probably their fixt parts alſo have no ſmall, perhaps the greateſt, ſhare in their efficacy. The flowers, dried and powdered, and thus diveſted of their odoriferous principle, prove ſtrongly ſternutatory. Watery or ſpirituous extracts made from them, given in doſes of a ſcruple or half a dram, act as gentle ſtimulating aperients and laxatives; and ſeem to partake of the purgative virtue, as well as of the bitterneſs, of aloes.

The roots have nothing of the fine ſmell which is admired in the flowers, but diſcover to the taſte a greater degree of penetrating bitterneſs. The bitter matter appears to be of the ſame kind in theſe as in the flowers; being equally extracted by water and ſpirit; remaining entire behind upon inſpiſſating the tinctures or infuſions; acting as a ſternutatory when ſnuffed up the noſe, and as a laxative or purgative when taken internally.

(a) Expunged.

The leaves have the ſame kind of bitterneſs, in a lower degree, mixed with a conſiderable roughneſs, and a ſlight ſweetiſhneſs.

LIMACES.

LIMACES terreſtres ſive Cochleæ terreſtres Pharm. Edinb.(a) THE SNAIL: an animal, lodged in a ſhort thick turbinated ſhell, whoſe aperture is cloſed in the winter with a kind of cement. The large aſh-coloured ſnail is ſaid to be the ſpecies intended for medicinal uſe; but the ſmaller, dark-coloured, ſpotted, ſtriped ſort, more common in gardens, is taken indiſcriminately, and appears to be not at all different in quality from the other.

THIS animal abounds with a viſcid ſlimy juice, which it readily gives out, by boiling, to milk or water, ſo as to render them thick and glutinous. The decoctions in milk are apparently very nutritious and demulcent, and ſtand recommended in a thin acrimonious ſtate of the humours, in conſumptive caſes, and emaciations.

LIMONES.

LIMONES Pharm. Lond. Limonia mala Pharm. Edinb. LEMONS: the fruit of the *malus limonia fructu acido Pharm. Lond. malus limonia acida C. B. Citrus Limon Linn.* a tree reſembling the orange; from which it differs chiefly in the leaves having no appendages at the bottom; and in the fruit having a nipple-like production at the end: it is a native of Aſia, and cultivated in the warmer parts of Europe, from whence we are ſupplied with the fruit. There are many varieties of this tree in regard to the fruit: by Linnæus, the ſeveral citrons, as well as lemons, are reckoned varieties of one ſpecies, which is diſtinguiſhed from thoſe of the orange kind, only by the pedicles of the leaves being naked. The terms citron and lemon have been often confounded together; what is commonly called citron by the French(b) and Germans(c) being our lemon, and their lemon our citron.

(a) Expunged.

(b) *Codex medicamentarius facultatis Pariſienſis, p.* xxxviii. & lxx.

(c) Hoffmann, *Diſſert. de citriis, Opera omnia, ſupplement.* ii. *par.* i. *p.* 720.

The yellow rind of lemons is a grateful aromatic, of common uſe in ſtomachic tinctures and infuſions, and for rendering other medicines acceptable to the palate and ſtomach: its flavour is one of thoſe which is beſt adapted for accompanying medicines of the bitter kind. It is leſs hot than orange peel, and yields in diſtillation a leſs quantity of eſſential oil: the oil is extremely light, almoſt colourleſs, in ſmell nearly as agreeable as the freſh peel, and frequently employed as a perfume: it is generally brought to us from the ſouthern parts of Europe, under the name of *eſſence* of lemons. The flavour of the lemon peel is more periſhable in keeping than that of orange peel, yet does not riſe ſo eaſily in diſtillation with ſpirit of wine: for a ſpirituous extract, prepared from the rind of lemons, retains the aromatic taſte and ſmell of the peel in a much greater degree than an extract prepared in the ſame manner from that of oranges. After digeſtion in the ſpirit, lemon peel proves tough, that of oranges criſp.

Ol. ſtillat. cort. limon. *Pharm. Edin.*

Eſſentia limonum *P. L.*

The juice of lemons differs from that of oranges only in being more acid. Six drams of it ſaturate about half a dram of fixt alkaline ſalt: this mixture, with the addition of a ſmall quantity of ſome grateful aromatic water or tincture, as ſimple cinnamon water, is given in caſes of nauſeæ and reachings, and generally abates, in a little time, the ſevere vomitings that happen in fevers, when moſt other liquors and medicines are thrown up as ſoon as taken: it is uſed alſo as a ſaline aperient in icterical, hydropical, inflammatory and other diſorders. A ſyrup made by diſſolving fifty ounces of fine ſugar in a quart† or two pounds and a half‡ of the depurated juice, is mixed occaſionally with draughts and juleps as a mild antiphlogiſtic, and ſometimes uſed in gargariſms for inflammations of the mouth and tonſils.

Syrup. e ſucco limonum
†*Phar. Lond.*
‡*Phar. Edin.*

LINARIA.

LINARIA Pharm. Edinb.[(a)] *Linaria vulgaris lutea flore majore C. B. Oſyris, linaria, ſive urinaria Lobel. Antirrhinum linaria Linn.* Toadflax: a plant with ſmooth round blueiſh ſtalks, and numerous, oblong, narrow, pointed leaves; greatly reſembling the *eſula minor* or pine ſpurge, ſo as ſcarcely to be otherwiſe diſtinguiſhable, before flowering, than by its wanting the milky juice with which the eſula abounds:

(a) Expunged.

on the tops of the ſtalks and branches appear ſpikes of yellow, irregular, monopetalous, gaping flowers, with a long tail behind, followed by roundiſh bicapſular ſeed-veſſels: it is perennial, grows wild about the ſides of dry fields, and flowers in June and July.

The leaves of this herb have a bitteriſh ſomewhat ſaline taſte: and when rubbed betwixt the fingers, yield a faint ſmell, reſembling that of elder. Taken internally, they are ſaid to be powerfully reſolvent, diuretic, and purgative: their principal uſe, however, has been external, in unguents and cataplaſms, for painful ſwellings of the hemorrhoidal veſſels; againſt which they have been ſaid to be particularly effectual.

LINGUA CERVINA.

LINGUA CERVINA ſeu Scolopendrium Pharm. Edinb.(a) *Lingua cervina officinarum C. B. Phyllitis Gerard. Aſplenium Scolopendrium Linn.* Harts-tongue: a plant with long, uncut, narrow bright green leaves, ſet on long hairy pedicles, and nipt at the bottom: it has no ſtalks or manifeſt flowers; the ſeeds are a fine duſt, lying in large, rough, brown, tranſverſe ſtreaks on the backs of the leaves. It is perennial, and found green at all times of the year, in moiſt, ſhady, ſtony places.

The leaves of harts-tongue ſtand recommended as aperients and corroborants, in obſtructions of the hypochondriacal viſcera, laxities of the inteſtines, and ſome diſorders of the breaſt: they have been chiefly uſed in apozems and infuſions, along with maidenhair, ſpleenwort, and other plants of the ſame kind, with which they appear to agree in virtue. To the taſte they are ſlightly roughiſh and ſweetiſh: with ſolution of chalybeate vitriol, they ſtrike a blackiſh colour. When freſh, they yield, on being rubbed or bruiſed, a faint unpleaſant ſmell, which in drying is in great part diſſipated.

LINI SEMEN.

LINI SEMEN Pharm. Lond. Lini vulgaris ſemen Pharm Edinb. Lini ſativi C. B. Lini uſitatiſſimi Linn. Linseed: reddiſh-brown, gloſſy, ſlippery, flat, pointed nearly oval ſeeds, of the common flax; an annual herb, cultivated in fields, on account of the mechanic uſes of its tough filamentous rind.

(a) Expunged.

Oleum expreſſum ſeminum lini *Phar. Edinb.*

THESE ſeeds have an unctuous, mucilaginous, ſweetiſh taſte, and no remarkable ſmell. On expreſſion, they yield a large quantity of oil; which, when carefully drawn, without the application of heat, has no particular taſte or flavour, though in ſome properties it differs conſiderably from moſt of the other oils of this kind; not congealing in winter; not forming a ſolid ſoap with fixt alkaline ſalts *(a)*; acting more powerfully, as a menſtruum, on ſulphureous bodies, than any other expreſſed oil that has been tried. The ſeeds, boiled in water, yield a large proportion of a ſtrong flavourleſs mucilage: to rectified ſpirit they give out little or nothing.

Infuſions of linſeed, like other mucilaginous liquors, are uſed as emollients, incraſſants, and obtunders of acrimony, in heat of urine, ſtranguries, thin defluxions on the lungs, and other like diſorders: a ſpoonful of the ſeeds, unbruiſed, is ſufficient for a quart of water, larger proportions rendering the liquor diſagreeably ſlimy. The mucilage obtained by inſpiſſating the infuſions, or decoctions, is an excellent addition for reducing diſguſtful powders into the form of an electuary; occaſioning the compound to paſs the fauces freely, without ſticking or diſcovering its taſte in the mouth. The expreſſed oil is ſuppoſed to be more of a healing and balſamic nature than the other oils of this claſs; and has been particularly recommended in coughs, ſpitting of blood, colics, and conſtipations of the belly. The ſeeds in ſubſtance, or the matter remaining after the expreſſion of the oil, are employed externally, in emollient and maturating cataplaſms. In ſome places, theſe ſeeds, in times of ſcarcity, have ſupplied the place of grain, but appeared to be an unwholeſome, as well as an unpalatable food: Tragus relates, that thoſe who fed upon them in Zealand, had the hypochondres in a ſhort time diſtended, and the face and other parts ſwelled; and that not a few died of theſe complaints.

(a) Geoffroy, *Memoires de l'acad. roy. des ſciences de Paris, pour l'ann.* 1741.

LINUM CATHARTICUM.

LINUM CATHARTICUM Pharm. Edinb. (a) & Linn. Linum pratenſe floribus exiguis C. B. Chamælinum. PURGING FLAX or MILL-MOUNTAIN: a ſmall plant, with little oblong ſmooth leaves, having one vein or rib running along the middle, joined in pairs cloſe to the ſtalks, which are round, ſlender, reddiſh, divided towards the upper part into fine branches, bearing on the tops white pentapetalous uncut flowers, followed each, as in the common flax, by a roundiſh, ribbed, acuminated capſule, containing ten flattiſh ſlippery ſeeds in as many cells. It is annual, and grows wild on chalky hills, and in dry paſture grounds.

THIS herb is ſaid to be an effectual and ſafe cathartic: an infuſion of an handful of the freſh leaves in whey or white wine, or a dram of the leaves in ſubſtance with a little creme of tartar and aniſeeds, are directed for a doſe. Linnæus recommends an infuſion of two drams of the dry leaves as a mild laxative. Their taſte is bitteriſh and diſagreeable.

LIQUIDAMBRA.

LIQUIDAMBRA Pharm. Edinb. (a) Ambra liquida Pharm. Argent. LIQUIDAMBER: a reſinous juice, of a yellow colour inclining to red, at firſt about the conſiſtence of turpentine, by age hardening into a ſolid brittle reſin; obtained from the tree that yields liquid ſtorax, *ſtyrax aceris folio Raii, Liquidambar ſtyraciflua Linn.* growing in Virginia, Mexico, and other parts of America, and bearing the colds of our own climate.

THIS juice has a moderately pungent, warm, balſamic taſte; and a very fragrant ſmell, not unlike that of ſtorax calamita heightened with a little ambergris. It was formerly in common uſe as a perfume, and might probably be applied to valuable medicinal purpoſes, but it is not at preſent much regarded, different artificial compoſitions having been often ſubſtituted to it in the ſhops.

(a) Expunged.

LITHOS-

LITHOSPERMUM.

LITHOSPERMUM ſeu Milium ſolis Pharm. Edinb.(a) *Lithoſpermum majus erectum C. B. Lithoſpermum officinale Linn.* GROMWELL: a rough plant, with ſtiff branched ſtalks, oblong acuminated leaves ſet alternately without pedicles; and whitiſh monopetalous flowers, ſcarcely longer than the cup, divided into five obtuſe ſections, followed by little roundiſh, hard, pearl-like ſeeds incloſed in the cup. It is perennial, grows wild in dry fields and by road-ſides, and flowers in May and June.

THE ſeeds of gromwell have been accounted notably diuretic; and recommended for cleanſing the kidneys and urinary paſſages from viſcid mucous matters, and promoting the expulſion of gravel. Their virtues do not appear to be very conſiderable; they have no ſmell, and their taſte is little other than farinaceous. They have long been diſcarded from practice.

* *LOBELIA.*

LOBELIA Pharm. Edinb. Rapunculus galeatus virginianus flore majore violaceo Moriſon. Lobelia ſiphilitica Linn. BLUE CARDINAL-FLOWER: an herbaceous perennial plant, with an erect ſtalk three or four feet high, and ovate-lanceolate ſubſerrated leaves, bearing long ſpikes of labiated, irregular, blue flowers, each with five ſtamina having connate antheræ, ſucceeded by a bilocular capſule, containing many ſmall ſeeds. The whole plant has a milky juice, and ſomething of a rank ſmell. It grows in moiſt places in Virginia, and bears the winters of our climate.

The root of this plant conſiſts of white fibres, a line in thickneſs, and about two inches in length. It reſembles tobacco in its taſte, which dwells long on the tongue, and is apt to excite vomiting. It was long a famous ſecret among the North American Indians for the cure of the venereal diſeaſe. The ſecret was purchaſed by Sir William Johnſon, and has been made public in the writings of Bartram, Kalm, and others.

(a) Expunged.

The doſe and mode of adminiſtering this medicine are not exactly defined, but the following directions are given as the moſt accurate. A decoction is made of a handful of the roots in three meaſures of water. Of this, half a meaſure is taken in the morning faſting, and repeated in the evening; and the doſe is gradually increaſed till its purgative effect becomes too violent, when the medicine is for a time to be intermitted, and then renewed, till a perfect cure is effected. One doſe daily is ſufficient during the latter part of the treatment; and the regimen during the whole proceſs is to be equally ſtrict with that obſerved in a courſe of mercurial ſalivation. From the third day, the ulcers are to be well waſhed twice daily with the decoction; and it is ſaid that when they are very deep and foul, the Indians ſprinkle them with powder of the internal bark of the ſpruce-tree. By this method we are aſſured that inveterate venereal complaints are cured without the aid of mercury; and the Edinburgh college ſeem to give credit to the efficacy of the lobelia, by receiving it into their lateſt catalogue of ſimples.

LUJULA.

LUJULA Pharm. Lond. Trifolium acetoſum vulgare C. B. Oxys alba Gerard. Alleluja, oxytriphyllum, & panis cuculi Quorundam. Oxalis Acetoſella Linn. WOOD SORREL: a plant, with the leaves and flowers iſſuing on ſeparate pedicles from the root: the leaves are broad, ſhaped ſomewhat like a heart, and ſtand three together: the flowers are ſolitary, whitiſh, monopetalous, divided deeply into five ſegments, followed by angular capſules, which burſt on being touched, and ſhed numerous ſmall browniſh ſeeds. It is perennial, grows wild in woods, and flowers in April.

THE leaves of the wood ſorrel are uſeful ſaline antiſeptics and antiphlogiſtics; ſimilar, both in taſte and in medicinal virtue, to thoſe of the *acetoſæ* or common ſorrels, but ſomewhat more acid, and rather more grateful both to the palate and ſtomach. Beaten with thrice their weight of fine ſugar, they form a grateful ſubacid conſerve. Their expreſſed juice, depurated, is a very agreeable acid: duly inſpiſſated, and ſet to ſhoot, it yields a cryſtalline acid ſalt of the ſame nature with that of the ſorrels: the

Conſerva lujulæ *Ph. Lon.*

the ſaline matter ſeems to amount to nearly one hundredth part of the weight of the freſh leaves.

LUMBRICUS.

LUMBRICUS TERRESTRIS Pharm. Edinb. (a) *Vermes terreſtres.* EARTH WORMS. Theſe inſects are ſuppoſed to have a diuretic and an antiſpaſmodic virtue. The faculty of Paris directs them to be prepared for medicinal uſe, by waſhing and drying them with a moderate heat. Moiſtened with wine, or vinous ſpirits, to prevent their putrefying, and ſet in a cellar, they are almoſt wholly reſolved in a few days into a ſlimy liquor, which is ſaid, when mixed with alkaline ſalts, to yield cryſtals of nitre.

LUPULUS.

LUPULUS Pharm. Pariſ. Lupulus mas & femina C. B. Lupulus ſalictarius Ger. Humulus Lupulus Linn. HOP: a rough plant, with very long, angular, climbing hollow ſtalks, and broad ſerrated leaves, cut generally into three or five ſharp-pointed ſections, and ſet in pairs at the joints: on the tops grow looſe ſcaly heads, with ſmall flat ſeeds among them. It is found wild in hedges and at the bottoms of hills, in England and other parts of Europe, but commonly cultivated in large plantations. It is perennial, and ripens in Auguſt or September its leafy heads, which are cured by drying with a gentle heat on kilns made for that purpoſe.

HOPS have a very bitter taſte, leſs ungrateful than moſt of the other ſtrong bitters, accompanied with ſome degree of warmth and aromatic flavour. They give out their virtue by maceration without heat, both to rectified and proof ſpirit; and, by warm infuſion, to water: to cold water they impart little, though macerated in it for many hours. The extracts obtained both by watery and ſpirituous menſtrua, particularly by the latter, are very elegant balſamic bitters, and promiſe to be applicable to valuable purpoſes in medicine; though the hop is at preſent ſcarcely regarded as a medicinal article, and ſcarcely otherwiſe uſed than for the preſerving of malt liquors; which, by the ſuperaddition of this balſamic, aperient, diuretic bitter, become leſs mucilaginous, more detergent, more diſpoſed to paſs off by urine, and in general more ſalubrious.

(a) Expunged.

LYCOPERDON.

LYCOPERDON ſive Crepitus lupi Pharm. Edinb.(a) *Fungus rotundus orbicularis C.B. Boviſta officinarum Dill. Lycoperdon Boviſta Linn.* PUFFBALL: a round or egg-ſhaped whitiſh fungus, with a very ſhort or ſcarcely any pedicle, growing in dry paſture grounds; when young, covered with tubercles on the outſide, and pulpy within; by age becoming ſmooth without, and changing internally into a very fine, light, browniſh duſt.

THE dried fungous matter and the duſt of lycoperdon have been long uſed among the common people, particularly in Germany, for reſtraining the bleeding of wounds, and immoderate hemorrhoidal fluxes, and drying up running ulcers. In ſome late trials, the duſt has been found to produce the ſame effect, in ſtopping hemorrhages after amputation, as the celebrated agaric of the oak.

MACIS.

MACIS Pharm. Lond. Macis officinarum C. B. MACE: a pretty thick, tough, unctuous membrane, reticular or variouſly chapt, of a lively reddiſh yellow colour approaching to that of ſaffron, enveloping the ſhell of the fruit whoſe kernel is the nutmeg. The mace, when freſh, is of a blood-red colour, and acquires its yellow hue in drying: it is dried in the ſun, upon hurdles fixed above one another, and then, as is ſaid, ſprinkled with ſea-water, to prevent its crumbling in carriage.

MACE has a pleaſant aromatic ſmell, and a warm, bitteriſh, moderately pungent taſte. It is in common uſe as a grateful ſpice; and appears to be, in its general qualities, nearly ſimilar to the nutmeg, both as the ſubject of medicine and of pharmacy. The principal difference conſiſts in the mace being much warmer, more bitteriſh, leſs unctuous, and ſitting eaſier on weak ſtomachs; in its yielding by expreſſion a more fluid oil, and in diſtillation with water a more ſubtile volatile one. What is called in the ſhops expreſſed oil of mace is prepared, not from this ſpice, but from the nutmeg.

(a) Expunged.

MAGNESIA.

MAGNESIA ALBA Pharm. Edinb. MAGNESIA: a fine white earth; ſoluble readily in all acids, the vitriolic as well as the others, into a bitter purgative liquor.

THIS earth has not hitherto been found naturally pure or in a ſeparate ſtate: it was for ſeveral years a celebrated ſecret in the hands of ſome particular perſons abroad, till the preparation was made public by Lanciſi in the year 1717 *(a)*, and afterwards by Hoffman in 1722 *(b)*. It was then extracted from the mother-lye, or the liquor which remains after the cryſtallization, of rough nitre; either by precipitation with a ſolution of fixt alkaline ſalt; or by evaporating the liquor, and calcining the dry reſiduum, ſo as to diſſipate the acids by which the earth had been made diſſoluble.

The magneſia, in this mother-lye, appears to have proceeded from the vegetable aſhes, which are either made ingredients in the compoſitions from which nitre is obtained, or elſe added in the elixation of the nitre: for the aſhes of different woods, burnt to perfect whiteneſs, and freed from their alkaline ſalt, were found to be, in part, of the ſame nature with the true magneſia *(c)*. But as quicklime alſo, in moſt of the German, French, and other European nitre-works, is commonly employed in large quantity, the earth obtained from the mother-lyes of thoſe works is rather a calcareous earth than magneſia. What is now brought from abroad, under the name of magneſia, gives plain proofs of its calcareous nature, by its burning into quicklime, and forming a ſelenites with the vitriolic acid.

(a) Annot. in Mercati metallothec. vatican. Arm. ii. *cap.* x. *p.* 50.

(b) Obſervationes Phyſico-chymicæ, lib. ii. *obſ.* 2.

(c) Of vegetable aſhes, moderately or ſtrongly calcined, only a part was found to diſſolve in acids, and this part appeared to be perfect magneſia. It is probable that the remainder might be reduced to the ſame ſtate by repeating the calcination.

The true magneſia is obtained in great purity, from a filtered ſolution of *ſal catharticus amarus*, by adding a filtered ſolution of any alkaline ſalt. *This, by its ſuperiour affinity with the vitriolic acid of the ſal catharticus, precipitates its earthy baſis, which is the magneſia. The method of conducting the proceſs is thus directed in the laſt Edinburgh diſpenſatory. Diſſolve ſeparately equal weights of ſal catharticus, and any pure fixed alkaline ſalt, in double their weight of water. Strain, and then mix them, and immediately add eight times the quantity of hot water. Let the liquor boil a while over the fire, and at the ſame time agitate it. Then let it ſtand till the heat be abated; and ſtrain it through a linen cloth, on which the magneſia will be left. This is to be waſhed by affuſions of pure water till it become perfectly taſteleſs.

*A method of preparing magneſia in the moſt perfect and convenient manner, was publiſhed by Mr. Henry in Vol. II. of the *Medical Tranſactions*. The ſame writer, likewiſe, in a publication of *Experiments and Obſervations* on various ſubjects, recommends the *calcination* of magneſia, as rendering it a fitter medicine in certain caſes. Magneſia is found by experiment to contain above half its weight of fixed air. The evolution of this in the ſtomach may increaſe flatulency, and cauſe uneaſineſs in weak bowels. By ſtrong calcination the air is expelled from magneſia, while its purgative virtue remains unimpaired; nor does it acquire any of the acrimony or cauſticity of lime. The Edinburgh college have now received this preparation, under the title of *magneſia uſta.*

The magneſia is recommended by Hoffman as an uſeful antacid, a ſafe and inoffenſive laxative in doſes of a dram or two, and a diaphoretic and diuretic, when given in ſmall doſes, as fifteen or twenty grains. Since this time, it has had a conſiderable place in the practice of foreign phyſicians, and has of late come into ſome eſteem among us, particularly in heart-burns, and for preventing or removing the many diſorders which children are thrown into from a redundance of acid humours in the firſt paſſages. It is preferred, on account of its laxative quality, to the teſtaceous and other abſorbent earths, which, unleſs gentle purgatives are given occaſionally to carry them off, are apt to lodge in the body, and occaſion a coſtiveneſs very detrimental to infants. It muſt be obſerved, however, that it is not the magneſia itſelf which proves laxative, but the ſaline compound reſulting from its coalition with acids: if there are no acid juices in the ſtomach to diſſolve it, it has no ſenſible operation, and in ſuch caſes it may be rendered purgative by drinking any kind of acidulous liquors after it. All the other known ſoluble earths yield with acids, not purgative, but more or leſs aſtringent compounds.

Magneſia, Manganeſe, *vitrariorum & minerologorum.*

It may be proper to obſerve, that the name magneſia has been principally applied to a ſubſtance of a very different kind; a native mineral, found in iron mines, and in the lead mines of Mendip hills, in Somerſetſhire, uſually of a dark grey colour, ſometimes bright and ſtriated like antimony, ſometimes dull, with only a few ſmall ſtriæ; remarkable for communicating, to a large proportion of glaſs in fuſion, a purpliſh or red tinge, which diſappears on a continuance of the fire, at the ſame time deſtroying the effect of many other colouring matters, and rendering foul or coloured glaſs clear: ſuppoſed to be an ore of iron, and recommended medicinally, when calcined by a ſtrong fire, as an aſtringent; but yielding no iron, or marks of iron, on any of the common trials by which that metal is diſtinguiſhed in ores; and in its nature and compoſition as yet little known. Mr. Pott relates, that on being calcined with ſulphur, and afterwards elixated with water, it yielded a large quantity of a white cryſtalline ſalt, of a bitteriſh aſtringent taſte, followed by a kind of ſweetneſs; and that the ſalt, after ſtrong calcination, taſted like burnt alum, but more acid *(a)*; from whence it may be preſumed, that this mineral conſiſts in great part of an earth analogous to that of alum, which, in combination with acids, makes one of the ſtrongeſt ſtyptics.

MAJORANA.

MAJORANA Pharm. Lond. & Edinb. Majorana vulgaris C. B. Origanum Majorana Linn. SWEET MARJORAM: a low plant, with ſlender, ſquare, branched, woody ſtalks; and little, oval, ſomewhat downy leaves, ſet in pairs: on the tops grow ſcaly heads of ſmall whitiſh labiated flowers, whoſe upper lip is erect and cloven, the lower divided into three ſegments. It is ſown annually in gardens, for culinary as well as medicinal uſes: the ſeeds, which rarely come to perfection in this country, are procured from the ſouth of France, where the plant is ſaid to be indigenous.

(a) *Miſcellanea Berolinenſia, tom.* vi.

The leaves and tops of marjoram have a pleaſant ſmell, and a moderately warm aromatic bitteriſh taſte. Infuſions of them in water, in colour browniſh, ſmell pretty ſtrongly, and taſte weakly and unpleaſantly of the herb: the blackiſh green tinctures, made in rectified ſpirit, have leſs ſmell, but a ſtronger and more agreeable taſte. In diſtillation with water, an eſſential oil is obtained, amounting, as Hoffman obſerves, to about one ounce from ſixty-four of the leaves ſlightly dried; when carefully drawn, of a pale yellow colour; by age, or too haſty fire in the diſtillation, contracting a reddiſh hue; of a very hot penetrating taſte, and in ſmell not near ſo agreeable as the marjoram itſelf: the remaining decoction, thus diveſted of the volatile aromatic matter, is weakly, but unpleaſantly bitteriſh and auſtere. Great part of the aromatic matter of the herb riſes alſo in the inſpiſſation of the ſpirituous tincture, and impregnates the diſtilled ſpirit: the remaining extract is ſtronger in taſte than that made with water, its quantity being leſs, but has not much of the warmth or flavour of the marjoram.

Ol. eſſent. majoranæ *Pharm. Lond.*

This plant has been chiefly recommended in diſorders of the head and nerves, in uterine obſtructions and mucous diſcharges proceeding from what is called a cold cauſe (that is, from a laxity and debility of the ſolids, and a ſluggiſh ſtate of the juices) and in the humoural aſthmas and catarrhs of old people. The powder of the leaves, their diſtilled water, and the eſſential oil properly diluted, are agreeable errhines, and accounted particularly uſeful in pituitous obſtructions of the noſtrils, and diſorders of the olfactory organs.

MALABATHRUM.

MALABATHRUM Pharm. Lond. Tamalapatra, Folium indum. Indian leaf: the leaf of the *cinamomum ſive canella malavarica & javanenſis C. B. Laurus Caſſia Linn.* or caſia-lignea tree, brought from the Eaſt Indies. It is of a firm texture; of an oblong oval figure, pointed at both ends; ſmooth and gloſſy on one ſide, which is the upper, and leſs ſo on the lower; of a yellowiſh green colour on the former, and a pale browniſh on the latter; furniſhed with three ribs, running its whole length, very protuberant on the lower ſide, and two ſmaller ones which bound the edges.

These leaves have a remarkable affinity, in one reſpect, with the caſia or bark of the tree, both the leaves themſelves and their pedicles being, like it, extremely mucilaginous: chewed, they render the ſaliva ſlimy and glutinous: infuſed in water, they give out a large proportion of a ſtrong tenacious mucilage. But of the aromatic flavour, which is ſtrong in the bark, the leaves, as brought to us, have very little: they ſcarcely diſcover any warmth or pungency to the taſte, and have little or no ſmell unleſs well rubbed, when they yield an agreeable, though weak, ſpicy odour. They are no otherwiſe made uſe of than as an ingredient in mithridate and theriaca; and are, when in their greateſt perfection, far inferiour to the mace which our college directs as a ſuccedaneum to them.

MALVA.

MALVA Pharm. Lond. & Edinb. Malva ſilveſtris folio ſinuato C. B. Malva ſylveſtris Linn. Common mallow: a plant with firm branched ſtalks, and roundiſh, notched leaves, ſet alternately on long pedicles: in their boſoms come forth bell-ſhaped monopetalous flowers, deeply divided into five heart-ſhaped ſections, of a pale purpliſh or whitiſh colour variegated with deeper ſtreaks, followed by a number of capſules ſet in form of a flat diſk, and containing each a kidney-ſhaped ſeed: the root is long, ſlender, and whitiſh. It is perennial, common in uncultivated grounds, and found in flower throughout the ſummer.

The leaves and flowers of the mallow are in taſte mucilaginous, and of no remarkable ſmell. The leaves were formerly of ſome eſteem, as an emollient or laxative dietetic article, in dry conſtipated habits in the warmer climates: at preſent, infuſions or decoctions of the leaves and flowers, and a conſerve made by beating the freſh flowers with thrice their weight of fine ſugar, are ſometimes directed in dyſuries, heat and ſharpneſs of urine, and other like complaints; but the principal uſe of the herb is in emollient glyſters, cataplaſms, and fomentations. The roots have been recommended in diſorders of the breaſt, and though now diſregarded, may perhaps deſerve ſome notice: they have a ſoft ſweet taſte, without any particular flavour, approaching in ſome degree to that of liquorice: an extract made from them by rectified ſpirit of wine is of great ſweetneſs.

Conſ. florum malvæ *P. L.*

MANNA.

MANNA Pharm. Lond. & Edinb. Manna ſeu Ros calabrinus Pharm. Pariſ. MANNA: a ſweet juice obtained from certain aſh trees *(a)* in the ſouthern parts of Europe, particularly in Calabria and Sicily, exuding from the leaves, branches, or trunk of the tree, and either naturally concreted, or exſiccated and purified by art.

* There are three ways in which manna is collected in Calabria. From the middle of June to the end of July, a very clear liquor exudes ſpontaneouſly from the trunk and branches of the tree, which by the ſun's heat concretes into whitiſh maſſes, which are ſcraped off the next morning with wooden knives, and dried in the ſun. This is called *Manna in the tear.* At the beginning of Auguſt, when this ceaſes to flow, the peaſants make inciſions in the bark, whence a juice flows, which concretes in larger maſſes and of a redder colour. This is the *fat* or *common Manna.* Beſides theſe ſorts, a third is procured by receiving the ſpontaneous exudations in June and July on ſtraws or chips of wood faſtened to the tree. This is the *cannulated* or *flaky Manna,* and is accounted the fineſt of the three.

Manna brigantiaca.

Juices of the ſame nature are collected, in the eaſtern countries, from other trees and ſhrubs *(b)*: and ſimilar exudations are ſometimes found on different kinds of trees in Europe, as particularly on the larch in the Briançonois in Dauphiny. How far the manna juices of different vegetables differ from one another, is not well known: but thus much is certain, that one and the ſame tree affords mannas very conſiderably different, in their colour, in their taſte, and in their diſpoſition to aſſume a ſolid concrete form; that is, in their purity, or the greater or leſs admixture of oily or reſinous matter.

The beſt ſort of the officinal or Calabrian manna is in oblong pieces or flakes, moderately dry, friable, very light, of a whitiſh or pale yellow colour, and in ſome degree tranſparent: the inferiour kinds are moiſt, unctuous, and brown. Both ſorts are ſaid to be ſometimes counterfeited by compoſitions of ſugar, honey, and purgative materials;

(a) Ornus: Fraxinus rotundiore folio, & fraxinus humilior minore & tenuiore folio *C. B.* Fraxinus Ornus *Linn.*

(b) *Vide* Cluſii *exotic. lib.* i. *p.* 164. Rauwolf *itin. p.* 74. Teixeira *hiſt. Perſ. p.* 29.

compoſitions of this kind, in a ſolid or dry form, may be diſtinguiſhed by their weight, compactneſs, and untranſparency: both the dry and moiſt compoſitions may be diſtinguiſhed by their taſte, which is ſenſibly different from that of true manna, and with greater certainty by their habitude to menſtrua.

This juice liquefies in a moiſt air, diſſolves readily in water, and, by the aſſiſtance of heat, in rectified ſpirit alſo; the impurities only being left by both menſtrua. On inſpiſſating the watery ſolution, the manna is recovered of a much darker colour than at firſt. From the ſaturated ſpirituous ſolution, great part of it ſeparates as the liquor cools, concreting into a flaky maſs, of a ſnowy whiteneſs, and a very grateful ſweetneſs: the liquor, remaining after the ſeparation of this pure ſweet part of the manna, leaves, on being inſpiſſated, an unctuous, dark coloured, diſagreeable matter, in greater or leſs quantity according as the manna made uſe of was leſs or more pure.

Manna, in doſes of an ounce and upwards, proves a gentle laxative: it operates in general with great mildneſs, ſo as to be ſafely given in inflammatory or acute diſtempers, where the ſtimulating purgatives have no place. It is particularly proper in ſtomachic coughs, or thoſe which have their origin in the ſtomach; the manna, by its ſweetneſs and unctuoſity, contributing to obtund as well as to evacuate the offending humours: in this intention it is ſometimes made into a linctus or lohoch, with equal quantities of oil of almonds and of ſyrup of violets. In ſome conſtitutions, however, it acts unkindly, eſpecially if given in conſiderable quantity, occaſioning flatulencies, gripes, and diſtenſions of the belly; inconveniences which may be generally obviated by a ſmall addition of ſome grateful aromatic. It does not produce the full effect of a cathartic, unleſs taken in large doſes, as two ounces or more, and hence is rarely employed in this intention by itſelf: it may be commodiouſly diſſolved in the purging mineral waters, or acuated with the cathartic ſalts, or other purgatives: its efficacy is ſaid to be peculiarly promoted by caſia fiſtularis, a mixture of the two purging more than both of them ſeparately. See *Caſia.*

MARGARITÆ.

MARGARITÆ Ph. Lond. Perlæ. Uniones. Pearls: ſmall calculous concretions, of a bright ſemitranſparent whiteneſs, found on the inſide of the ſhell of the *concha margaritifera* or mother-of-pearl fiſh, as alſo of certain oyſters and other ſhell-fiſhes. The fineſt pearls are brought from the Eaſt and Weſt Indies: the oriental, which are moſt eſteemed, have a more ſhining ſilver-like hue than the occidental, which laſt are generally ſomewhat milky: an inferiour ſort is ſometimes met with in the ſhell-fiſhes of our own ſeas, particularly on the coaſts of Scotland. The coarſe rough pearls, and the very ſmall ones which are unfit for ornamental uſes, called *rag pearl* and *ſeed pearl*, are thoſe generally employed in medicine.

It is ſaid, that counterfeit pearls are often brought from China, made of pellets of clay coated with the white matter of oyſter-ſhells. The clay may be diſtinguiſhed by its acquiring an additional hardneſs in the fire, and reſiſting acids; whereas the true pearls calcine in the fire and become quicklime, and readily diſſolve in acids; the vitriolic excepted, which precipitates them when previouſly diſſolved by other acids.

Theſe properties of the pearl, ſhew that it is an earth of the ſame kind with crabs-claws, oyſter-ſhells, and the other calcareous animal abſorbents. It has no other virtues than thoſe of the other ſubſtances of this claſs, and does not poſſeſs thoſe virtues in any greater degree than the common teſtacea.

MARRUBIUM.

MARRUBIUM Pharm. Lond. & Edinb. Marrubium album vulgare C. B. Marrubium vulgare Linn. White horehound: a hoary plant, with ſquare ſtalks, and roundiſh wrinkled indented leaves, ſet in pairs on long pedicles; in the boſoms of which come forth thick cluſters of whitiſh labiated flowers, in ſtriated cups, whoſe diviſions terminate in ſharp points or prickles. It is perennial, grows wild in uncultivated grounds, and flowers in June.

The leaves of horehound have a moderately ſtrong ſmell, of the aromatic kind, but not agreeable, which by drying is improved, and in keeping for ſome months is in great part diſſipated: their taſte is very bitter, penetrating, diffuſive, and durable in the mouth. From theſe qualities, and their ſenſible operation, when taken in any conſiderable doſes, of looſening the body, it may be preſumed that this herb is a medicine of ſome efficacy, and has no ill claim to the corroborant and aperient virtues, for which it is recommended, in humoural aſthmas, and in menſtrual ſuppreſſions, cachexies, and other chronical diſorders proceeding from a viſcidity of the fluids and obſtructions of the viſcera: a dram of the dry leaves in powder, or two or three ounces of the expreſſed juice, or an infuſion of half a handful or a handful of the freſh leaves, are commonly directed for a doſe. The dry herb gives out its virtue both to watery and ſpirituous menſtrua, tinging the former of a browniſh, the latter of a green colour: on inſpiſſating the watery infuſion, the ſmell of the horehound wholly exhales, and the remaining extract proves a ſtrong and almoſt flavourleſs bitter: rectified ſpirit carries off likewiſe greateſt part of the flavour of the herb, leaving an extract in leſs quantity than that obtained by water, and of a more penetrating bitterneſs.

MARUM.

MARUM SYRIACUM Pharm. Lond. Majorana ſyriaca vel cretica C. B. Marum cortuſi J. B. Chamædrys maritima incana fruteſcens foliis lanceolatis Tourn. Origanum Syriacum Linn. MARUM, SYRIAN HERB-MASTICH: a low ſhrubby plant, with ſmall oval leaves, pointed at each end, ſet in pairs, without pedicles, of a dilute green colour above, and hoary underneath: in their boſoms appear ſolitary, purple, labiated flowers, wanting the upper lip; the lower lip is divided into five ſegments, the middlemoſt of which is larger than the reſt, and hollowed like a ſpoon: each flower is followed by four roundiſh ſeeds incloſed in the cup. It is ſaid to be a native of Syria, and of one of the Hieres iſlands, on the coaſt of Provence: in our climate it does not well bear ſevere winters without ſhelter.

THE leaves of marum have a bitteriſh, aromatic, very pungent taſte; and when rubbed a little, yield a quick piercing ſmell, which provokes ſneezing. They have been chiefly made uſe of as an ingredient in ſternutatory powders, though, from their ſenſible qualities, they promiſe to be applicable to more important purpoſes, and to have no ill title to the ſtimulating, attenuating, deobſtruent, antiſeptic virtues aſcribed to them by Wedelius in a diſſertation on this plant: they ſeem particularly well adapted as an ingredient in the volatile oily aromatic ſpirits with which their agreeable pungency in a great degree coincides.

The marum loſes but little of its pungency on being dried, and in this reſpect it differs remarkably from many other acrid herbs, as thoſe called antiſcorbutic. It gives out its active matter partially to water, and completely to rectified ſpirit: the watery infuſions, in colour yellow, though pretty ſtrongly impregnated with the ſmell of the marum, have only a weak taſte: the ſpirituous tinctures, in colour yellowiſh-green, are ſtrongly impregnated with the taſte, but have the ſmell in great meaſure covered by the menſtruum. Diſtilled with water, it yields a highly pungent, ſubtile, volatile eſſential oil, ſimilar to that of ſcurvygraſs, but ſtronger, and of a leſs periſhable pungency: the remaining decoction is little other than bitteriſh. Rectified ſpirit carries off likewiſe, in the inſpiſſation of the ſpirituous tincture, a conſiderable ſhare of the ſmell and pungency of the marum, but leaves much the greateſt part concentrated in the extract; which, on being taſted, fills the mouth with a durable, penetrating, glowing warmth.

MARUM VULGARE.

MARUM VULGARE Pharm. Lond. Sampſucus ſive marum maſtichen redolens C. B. Thymbra hiſpanica majoranæ folio Tourn. Clinopodium quibuſdam, maſtichina gallorum J. B. Thymus maſtichina Linn. COMMON HERB-MASTICH: a low ſhrubby plant, with ſmall oblong leaves, pointed at both ends, ſet in pairs, without pedicles: at the tops of the branches ſtand woolly heads, containing ſmall white labiated flowers, whoſe upper lip is erect and cloven, the lower divided into three ſegments: each flower is followed by four ſeeds incloſed in the cup. It grows ſpontaneouſly on dry gravelly grounds in Spain, and in the like ſoils it bears the ordinary winters of our own climate.

THIS plant is employed chiefly, like the foregoing, as an errhine. It is conſiderably pungent, though far leſs ſo than the *marum ſyriacum*; and of a ſtrong agreeable ſmell, ſomewhat reſembling that of maſtich.

MASTICHE.

MASTICHE.

MASTICHE Pharm. Lond. & Edinb. Mastich: a concrete reſin, obtained in the iſland Chio from the lentiſk tree; brought over in ſmall yellowiſh tranſparent brittle grains or tears. From tranſverſe inciſions made in the bark of the tree, about the beginning of Auguſt, the reſin exudes in drops, which running down, and concreting on the ground, are thence ſwept up *(a)*. The tree is raiſed alſo in ſeveral parts of Europe; but no reſin has been obſerved to iſſue from it in theſe climates: nor do all the trees of this ſpecies, in the iſland Chio itſelf, afford this commodity.

This reſin has a light agreeable ſmell, eſpecially when rubbed or heated: in chewing, it firſt crumbles, ſoon after ſticks together, and becomes ſoft and white like wax, without impreſſing any conſiderable taſte. It totally diſſolves, except the earthy impurities, which are commonly in no great quantity, in rectified ſpirit of wine, and then diſcovers a degree of warmth and bitterneſs, and a ſtronger ſmell than that of the reſin in ſubſtance: the colour of the ſolution is a pale yellow. Boiled in water, it impregnates the liquor with its ſmell, but gives out little or nothing of its ſubſtance: diſtilled with water, it yields a ſmall proportion of a limpid eſſential oil, in ſmell very fragrant, and in taſte moderately pungent. Rectified ſpirit brings over alſo, in diſtillation, the more volatile odorous matter of the maſtich.

Maſtich is recommended, in doſes of from half a ſcruple to half a dram, as a mild corroborant and reſtringent, in old coughs, hemoptyſes, diarrhœas, weakneſs of the ſtomach, *&c.* It is given either in ſubſtance, divided by other materials; or diſſolved in ſpirit and mixed with ſyrups; or diſſolved in water into an emulſion by the intervention of gum-arabic or almonds: the decoctions of it in water, which ſome have directed, have little or nothing of the virtue of the maſtich. It is ſaid that this reſin is commonly employed as a maſticatory, in Chio and among the Turkiſh women, for ſweetening the breath, and ſtrengthening the gums and teeth; and that when thus uſed, by procuring a copious excretion of ſaliva, it proves ſerviceable in catarrhous diſorders.

(a) Tournefort, *Voyages to the Levant, vol.* i. *p.* 287.

MATRICARIA.

MATRICARIA Pharm. Lond. Matricaria vulgaris ſeu ſativa C. B. Febrifuga Dorſten. Matricaria Parthenium Linn. FEVERFEW: a plant with firm branched ſtalks, and roughiſh leaves, each of which is compoſed of two or three pairs of indented oval ſegments ſet on a middle rib, with an odd one at the end, cut into three lobes: the flowers ſtand on the tops in the form of an umbel, conſiſting, each, of a number of ſhort white petala, ſet round a yellow diſk, which is followed by ſmall ſtriated ſeeds. It is biennial, or of longer duration; grows wild in hedges and uncultivated places, and flowers in June.

THE leaves and flowers of feverfew have a ſtrong, not agreeable ſmell, and a moderately bitter taſte; both which they communicate, by warm infuſion, to water and to rectified ſpirit. The watery infuſions, inſpiſſated, leave an extract of conſiderable bitterneſs, and which diſcovers alſo a ſaline matter, both to the taſte, and in a more ſenſible manner, by throwing up to the ſurface ſmall cryſtalline efflorеſcences in keeping: the peculiar flavour of the matricaria exhales in the evaporation, and impregnates the diſtilled water: on diſtilling large quantities of the herb, a yellowiſh ſtrong-ſcented eſſential oil is found floating on the ſurface of the water. Rectified ſpirit carries off but little of the flavour of this plant in evaporation or diſtillation: the ſpirituous extract is far ſtronger in taſte than that made with water, and more agreeable in ſmell than the herb itſelf. The quantity of ſpirituous extract, according to Cartheuſer's experiments, is only about one ſixth the weight of the dry leaves, whereas the watery extract amounts to near one half.

This herb is recommended as a warm, aperient, carminative bitter; and ſuppoſed to be particularly ſerviceable in female diſorders. It appears, from the above analyſis, to be a medicine of no inconſiderable virtue, in ſome degree ſimilar to camomile.

MECHOACANNA.

MECHOACANNA Pharm. Edinb.[a] *Bryonia mechoacanna alba C. B. Convolvulus americanus mechoacan dictus Raii. Jalappa alba,*

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[a] Expunged.

Rhabarbarum album Quibuſdam. MECHOACAN: the root of an American convolvulus, *(Convolvulus Mechoacanna Linn.)* brought chiefly from a province in Mexico of the ſame name, in thin tranſverſe ſlices, like jalap, but larger and whiter.

THIS root was firſt introduced, about the year 1524, and continued in eſteem for a conſiderable time, as a mild cathartic, of very little taſte or ſmell, not liable to offend the ſtomach, of ſlow operation, but effectual and ſafe: by degrees, it gave place to jalap, which has now, among us, almoſt wholly ſuperſeded its uſe. It ſeems to differ from jalap only in being weaker: the reſins obtained from the two roots appear to be of the ſame qualities, but mechoacan ſcarcely yields one ſixth part ſo much as jalap does, and hence requires to be given in much larger doſes to produce the ſame effects. The doſe of the mechoacan in ſubſtance is from one dram to two or more.

MEL.

MEL Pharm. Lond. HONEY: a ſweet vegetable juice; collected by the bee from the flowers of different plants, and depoſited in the cells of the combs; from which it is extracted, either by ſpontaneous percolation through a ſieve in a warm place, or by expreſſion. That which runs ſpontaneouſly is purer than the expreſſed; a quantity of the waxy and other impurities being forced out along with it by the preſſure, eſpecially when the combs are previouſly heated. The beſt ſort of honey is of a thick conſiſtence, a whitiſh colour, an agreeable ſmell, and a very pleaſant taſte: both the colour and flavour are ſaid to differ in ſome degree according to the plants which the bees collect it from.

HONEY, expoſed to a gentle heat, as that of a water bath, becomes thin, and throws up to the ſurface its waxy impurities, together with the meal or flower ſometimes fraudulently mingled with it, which may thus be ſeparated by deſpumation, ſo as to leave the honey pure. On continuing the heat, there riſes a conſiderable quantity of aqueous fluid, impregnated with the fine ſmell of the honey: the inſpiſſated reſiduum, like the honey at firſt, diſſolves both in water and in rectified ſpirit, and promotes the union of oily and reſinous ſubſtances with watery liquors. By treating the inſpiſſated maſs with moiſt clay, as practiſed by the ſugar-bakers for purifying ſugar from its unctuous treacly matter, the unctuous parts of honey may in like manner be ſeparated, and its pure ſweet matter obtained in the form of a ſolid, ſaline, white concrete.

This juice is an uſeful ſweet, for medicinal as well as domeſtic purpoſes; more aperient and detergent than the ſimpler ſweet prepared from the ſugar cane; particularly ſerviceable for promoting expectoration in diſorders of the breaſt, and as an ingredient in cooling and detergent gargariſms. For theſe, and other ſimilar intentions, it is ſometimes mixed with vinegar, in the proportion of about two pounds to a pint, and the mixture boiled down to the conſiſtence of a ſyrup; ſometimes impregnated with the virtues of different vegetables, by boiling it in like manner with their juices or infuſions, till the watery parts of the juice or infuſion have exhaled and left the active matter incorporated with the honey. It excellently covers the taſte of purging ſalts and waters. The boiling of honey, though it diſſipates great part of its odorous matter, and thus proves in ſome caſes injurious to it, is in ſome caſes alſo of advantage: there are particular conſtitutions with which honey remarkably diſagrees, and in which even very ſmall quantities occaſion gripes, purging, and great diſorder: by boiling, it loſes of that quality by which it produces theſe effects.

Oxymel ſimplex *Ph. Lon.*

* The Edinburgh college ſeem at preſent of opinion that honey has no qualities which render it in any caſe preferable to ſugar; ſince they have entirely expunged it, and all preparations in which it entered, from their laſt pharmacopœia.

MELILOTUS.

MELILOTUS Pharm. Edinb. (a) *Melilotus officinarum germaniæ C. B. Lotus ſilveſtris. Trifolium odoratum. Trifolium Melilotus officinalis Linn.* MELILOT: a plant with ſmooth oval ſtriated leaves, ſtanding three together, on ſlender pedicles; and round, ſtriated, branched ſtalks, terminated by long ſpikes of papilionaceous flowers drooping downwards, which are followed by ſhort thick wrinkled pods, containing, each, one or two roundiſh ſeeds. It is annual or biennial, and found in flower, in hedges and corn fields, greateſt part of the ſummer.

(a) Expunged.

Melilot has been ſaid to be reſolvent, emollient, anodyne, and to participate of the virtues of camomile. In its ſenſible qualities, it differs very materially from that plant: its taſte is unpleaſant, ſubacrid, ſubſaline, but not bitter: when freſh, it has ſcarcely any ſmell; in drying, it acquires a pretty ſtrong one, of the aromatic kind, but not agreeable. Linnæus obſerves, in the third volume of the *Amœnitates Academicæ*, that diſtilled water of melilot, of little ſmell itſelf, remarkably heightens the fragrance of other ſubſtances. The principal uſe of this plant has been in glyſters, fomentations, and other external applications: it formerly gave name to one of the officinal plaſters; which received from the melilot a green colour and an unpleaſant ſmell, without any addition to its efficacy.

MELISSA.

MELISSA Pharm. Lond. & Edinb. Meliſſa hortenſis C. B. Melyſſophyllum, mellifolium, mellitis, citrago, citraria, cedronella, apiaſtrum. Meliſſa officinalis Linn. Balm: a plant with ſquare ſtalks; and oblong, pointed, dark green, ſomewhat hairy leaves, ſet in pairs; in the boſoms of which come forth pale reddiſh labiated flowers, ſtanding ſeveral together on one pedicle, with the upper lip roundiſh, erect, and cloven, and the lower divided into three ſegments. It is perennial; a native of mountainous places in the ſouthern parts of Europe; and flowers in our gardens in June.

This plant, formerly celebrated for cephalic, cordial, ſtomachic, uterine, and other virtues, is now juſtly ranked among the milder corroborants. It has a pleaſant ſmell, ſomewhat of the lemon kind, and a weak aromatic taſte; of both which it loſes a conſiderable part on being dried; a ſlight roughiſhneſs, which the freſh herb is accompanied with, becoming at the ſame time more ſenſible. Infuſions of the leaves in water, in colour greeniſh or reddiſh brown according to the degree of ſaturation, ſmell agreeably of the herb, but diſcover no great taſte, though, on being inſpiſſated, they leave a conſiderable quantity of a bitteriſh and ſomewhat auſtere extract: the infuſions are ſometimes drank as tea in chronical diſorders proceeding from debility and relaxation, and ſometimes acidulated with lemon juice for a diluent in acute diſeaſes. On diſtilling the freſh herb with water, it impregnates the firſt runnings pretty ſtrongly with its grateful flavour: when large quantities are ſubjected to the operation at once, there ſeparates, and riſes to the ſurface of the aqueous fluid, a ſmall portion of eſſential oil, in colour yellowiſh, of a very fragrant ſmell, apparently of great medicinal activity, commended by Hoffman as an excellent corroborant of the nervous ſyſtem. Tinctures of the newly-dried leaves made in rectified ſpirit, in colour blackiſh green, diſcover leſs of the balm ſmell than the watery infuſions, but have its taſte in a greater degree: inſpiſſated, they leave an extract in ſomewhat leſs quantity than that obtained by water, in taſte ſtronger, and which retains a conſiderable ſhare of the ſpecific ſmell and flavour of the balm, but is leſs agreeable than the herb in ſubſtance.

MENTHA.

MINT: a perennial herb; with ſquare ſtalks; ſerrated leaves ſet in pairs; and ſpikes of monopetalous flowers, each of which is cut into four ſections, and followed by four ſeeds incloſed in the cup.

1. MENTHA VULGARIS *Pharm. Lond.* *Mentha ſativa Pharm. Edinb.* *Mentha anguſtifolia ſpicata C. B.* *Mentha viridis Linn.**(a) Mint, hartmint, ſpearmint: with oblong, narrow, pointed leaves, joined cloſe to the ſtalk; and ſmall purpliſh flowers ſtanding in long ſpikes on the tops. It is a native of the warmer climates, common in our gardens, and flowers in June and July.

THIS herb has a ſtrong agreeable aromatic ſmell, and a bitteriſh, roughiſh, moderately warm taſte. It is in general uſe as a reſtringent ſtomachic and carminative: in vomitings and weakneſs of the ſtomach, there are, perhaps, few ſimples of equal efficacy. Some report that it prevents the coagulation of milk, and hence recommend it to be uſed along with milk diets, and even in cataplaſms and fomentations for reſolving coagulated milk in the breaſts: upon experiment, the curd of milk, digeſted in a ſtrong infuſion of mint, could not be perceived to be any otherwiſe affected than by common water, but milk, in which mint leaves were ſet to macerate, did not coagulate near ſo ſoon as an equal quantity of the ſame milk kept by itſelf.

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*(a) There is much confuſion in the ſpecies of mints as deſcribed by different botaniſts. Though the *viridis* of Linnæus is given as our ſpearmint, it can ſcarcely be the ſame, from Bergius's account of it. The *Mentha viridis*, he ſays, is ſtronger and leſs agreeable than the *ſylveſtris*, of a weaker taſte than the *piperita*, and therefore erroneouſly ſubſtituted to it in the ſhops. *Mat. Med. p.* 516.

The leaves are ſometimes taken in ſubſtance, beaten with thrice their weight of fine ſugar into a conſerve. Moderately bruiſed, they yield upon expreſſion about two thirds their weight of a turbid, brown-coloured, ſomewhat mucilaginous juice; which is commonly ſuppoſed to retain the full virtues of the mint, but which, though participating of the bitterneſs and ſubaſtringency of the herb, is found to have little or nothing of the peculiar aromatic flavour in which the principal virtue of this plant reſides. The leaves loſe in drying about three fourths of their weight, without ſuffering much loſs of their ſmell or taſte; nor is the ſmell ſoon diſſipated by moderate warmth, or impaired in keeping.

Conſerv. fol. menth. vulg. *Pharm. Lond.*

Cold water, by maceration for ſix or eight hours on the dry herb, and warm water in a ſhorter time, become richly impregnated with its flavour: if the maceration be long continued, the groſſer parts of the mint are extracted, and the liquor proves leſs grateful: on boiling the mint in water till the aromatic matter is diſſipated, the remaining dark-brown liquor is found nearly ſimilar to the recent juice; unpleaſant, bitteriſh, ſubaſtringent, and mucilaginous. By diſtillation, a pound and a half of the dry leaves communicate a ſtrong impregnation to a gallon of water †: the diſtilled water proves rather more elegant if drawn from the freſh plant in the proportion of ten pints from three pounds ‡ than from the dry plant, though the latter is frequently made uſe of as being procurable at all times of the year. Along with the aqueous fluid, an eſſential oil diſtils, of a pale yellowiſh colour, changing by age to a reddiſh, and at length to a dark red, in quantity near an ounce from ten pounds of the freſh herb in flower, ſmelling and taſting ſtrongly of the mint, but ſomewhat leſs agreeable than the herb itſelf.

† Aq. menthæ vulg. ſimpl. *Phar. Lond.*

‡ Aq. menthæ ſativæ *Phar. Edinb.*

Ol. menthæ eſſentiale *Ph. Lond. & Edin.*

Dry mint, digeſted in rectified ſpirit, either in the cold, or with a gentle warmth, gives out readily its peculiar taſte and ſmell, without imparting the groſſer and more ungrateful matter, though the digeſtion be long continued. The tincture appears by day-light of a fine dark green, by candle-light of a bright red colour: a tincture extracted from the remaining mint by freſh ſpirit appears in both lights green: the colour of both tinctures changes, in keeping, to a brown. On gently inſpiſſating the filtered tinctures, little or nothing of their flavour riſes with the ſpirit: the remaining extract poſſeſſes the concentrated virtues of about ten times its weight of the dry herb; and differs from the products obtained by diſtillation with water, in this, that the bitterneſs and ſubaſtringency of the mint, which are there ſeparated from the aromatic part, are here united with it.

Proof ſpirit extracts the ſmell and taſte of mint, but not its green colour. The tincture is brown, like the watery infuſions; and, like them alſo, it becomes ungrateful, if the digeſtion is long continued. On gentle diſtillation, the more ſpirituous portion, which riſes at firſt, diſcovers little flavour of the mint; but as ſoon as the watery part begins to diſtil, the virtues of the mint come over plentifully with it. Hence the officinal ſpirituous water, prepared by drawing off a gallon of proof ſpirit from a pound and a half of the dried leaves, proves ſtrongly impregnated with the mint. Aq. menthæ vulgaris ſpirituoſa *P. L.*

After mint has been repeatedly infuſed in water, rectified ſpirit ſtill extracts from it a green tincture, and a ſenſible flavour of mint: on the other hand, ſuch as has been firſt digeſted in ſpirit, gives out afterwards to water a brown colour, and a kind of nauſeous mucilaginous taſte very different from that which diſtinguiſhes mint. The ſpirituous tinctures mingle with watery liquors without precipitation or turbidneſs; but ſpirituous liquors, impregnated with its pure volatile parts by diſtillation, turn milky on the admixture of water.

2. MENTHA AQUATICA *ſive Mentaſtrum Pharm. Pariſ. Mentha aquatica ſive ſiſymbrium J. B. Mentha rotundifolia paluſtris ſive aquatica major C. B. Mentha aquatica Linn.* Water-mint: with ſomewhat oval leaves ſet on pedicles, and long ſtamina ſtanding out from the flowers.

3. MENTASTRUM HIRSUTUM: *Auricularia officinarum Dale: Mentha paluſtris folio oblongo C. B.* Hairy water-mint: with long hairy leaves having no pedicles; and broad ſpikes of flowers.

BOTH theſe plants grow wild in moiſt meadows, marſhes, and on the brinks of rivers, and flower towards the end of ſummer. They are leſs agreeable in ſmell than the ſpearmint, and in taſte bitterer and more pungent: the ſecond ſort approaches in ſome degree to the flavour of pennyroyal. They yield a much ſmaller proportion of eſſential oil: from twenty pounds of the water-mint were obtained ſcarcely three drams. With regard to their virtues, they appear to partake of thoſe of ſpearmint; to which they are obviouſly far inferiour as ſtomachics. The hairy water-mint is ſuppoſed to be the *auricularia, planta zeylanica,* or earwort, celebrated by Marloe for the cure of deafneſs: though probably not more effectual againſt that complaint, than the other water-mint againſt nephritic ones, in which it is ſaid to have been formerly an empyrical ſecret *(a)*.

4. MENTHA PIPERITIS *Pharm. Lond. & Edinb. Mentha ſpicis brevioribus & habitioribus, foliis menthæ fuſcæ, ſapore fervido piperis Raii ſynopſ. Mentha piperita Linn.* Pepper-mint: with acuminated leaves on very ſhort pedicles; and the flowers ſet in ſhort thick ſpikes or heads. It is a native of this kingdom; and, ſo far as is known, of this kingdom only: it is much leſs common, however, than the other wild mints; but having been of late received in general practice as a medicine, it is now raiſed plentifully in gardens, and does not appear, like many of the other plants that grow naturally in watery places, to loſe any thing of its virtue with this change of ſoil.

THIS ſpecies has a more penetrating ſmell than any of the other mints; and a much ſtronger and warmer taſte, pungent and glowing like pepper, and ſinking as it were into the tongue. It is a medicine of great importance in flatulent colics, hyſteric depreſſions, and other like complaints; exerting its activity as ſoon as taken into the ſtomach, and diffuſing a glowing warmth through the whole ſyſtem; yet not liable to heat the conſtitution near ſo much as might be expected from the great warmth and pungency of its taſte.

By maceration or infuſion, it readily and ſtrongly impregnates both water and ſpirit with its virtue; tinging the former of a browniſh colour, and the latter of a deeper green than the other mints. In

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(a) In the firſt volume of Linnæus's *Amœnitates Academicæ,* the auricularia is ſaid to be not at all of the mint kind, but a ſtellated plant, akin to galium.

Ol. eſſentiale menthæ piperitidis *Ph. Lond. & Edin.*

diſtillation with water, it yields a conſiderable quantity of eſſential oil, of a pale greeniſh yellow colour, growing darker coloured by age, very light, ſubtile, poſſeſſing in a high degree the ſpecific ſmell and penetrating pungency of the pepper-mint*(a): the decoction remaining after the ſeparation of this active principle, is only bitteriſh and ſubaſtringent, like thoſe of the other mints. Rectified ſpirit, drawn off with a gentle heat from the tincture made in that menſtruum, brings over little of the virtue of the herb, nearly all its pungency and warmth remaining concentrated in the extract, the quantity of which amounts to about one fourth of the dried leaves. A ſimple and a ſpirituous diſtilled water, drawn in the ſame proportions as thoſe of ſpearmint, and the eſſential oil, are kept in the ſhops.

Aq. menthæ piperit. ſimp. *Ph. L. & Ed.*
Aq. menthæ piperit. ſpirituoſa *Phar. Lond. & Edin.*

MERCURIALIS.

HERB-MERCURY: a plant with oblong, acuminated, indented leaves, ſtanding in pairs: in their boſoms come forth, either ſpikes of imperfect flowers, ſet in three-leaved cups, falling off without any ſeeds; or little rough balls, joined two together, including each a ſingle ſeed.

1. Mercurialis *mas & femina Pharm. Edinb.(b) Mercurialis teſticulata ſive mas, & mercurialis ſpicata ſive femina dioſcoridis & plinii C. B. Mercurialis annua Linn.* French mercury: with ſmooth gloſſy leaves, and branched ſtalks. The flowering plants, called female, and thoſe which produce ſeeds, called male, are both annual, and grow wild together in ſhady uncultivated grounds.

The leaves of this plant have no remarkable ſmell, and very little taſte: when freed by exſiccation from the aqueous moiſture, with which they abound, their prevailing principle appears to be of the mucilaginous kind, with a ſmall admixture of ſaline matter. They are ranked among the emollient oleraceous herbs, and ſaid to gently looſen the belly: their principal uſe has been in glyſters.

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*(a) Some particles of a true camphor were procured from dried pepper-mint by cohobation. *Gaubii Adverſar.*

(b) Expunged.

2. Cynocrambe: *Mercurialis montana teſticulata & ſpicata C. B. Mercurialis perennis Linn.* Dogs mercury, male and female: with rough leaves and unbranched ſtalks. It is perennial, and grows wild in woods and hedges.

This ſpecies has been ſaid by ſome to be ſimilar in quality to the foregoing, and to be more acceptable to the palate as an oleraceous herb: it has lately however been found to be poſſeſſed of noxious qualities, acting as a virulent narcotic. An inſtance is related in N°. 203 of the Philoſophical Tranſactions, of its ill effects on a family, who eat at ſupper the herb boiled and fried: the children, who were moſt affected by it, vomited, purged, and fell faſt aſleep: two ſlept about twenty-four hours, then vomited and purged again, and recovered: the other could not be waked for four days, and then opened her eyes and expired.

MEUM.

MEUM ATHAMANTICUM Pharm. Lond. Meum foliis anethi C.B. Meu & athamanta & radix urſina quibuſdam. Æthuſa Meum Linn. Spignel, Bauldmony: an umbelliferous plant, with buſhy leaves divided into ſlender ſegments, like thoſe of fennel, but finer; producing large, oblong, ſtriated ſeeds, flat on one ſide, and convex on the other: the root is long, variouſly branched, with generally a number of hairs or filaments at top, which are the remains of the ſtalks of former years, of a browniſh colour on the outſide, pale or whitiſh within, when dried of a fungous texture. It is perennial, grows wild in meadows in ſome of the mountainous parts of England, and flowers in June.

The root of ſpignel, recommended as a carminative, ſtomachic, and for attenuating viſcid humours, appears to be nearly of the ſame nature with that of lovage; differing, in its ſmell being rather more agreeable, ſomewhat like that of parſneps, but ſtronger, and in its taſte being leſs ſweet and more warm or acrid. The difference betwixt the two roots is moſt conſiderable in the extracts made from them by water; the extract of ſpignel root being unpleaſantly bitteriſh, with little or nothing of the ſweetneſs of that of lovage roots. The ſpirituous extract of ſpignel, more aromatic than that of the lovage, is moderately warm, bitteriſh, and pungent.

MILLEFOLIUM.

MILLEFOLIUM Pharm. Edinb. Millefolium vulgare album, & millefolium purpureum C. B. Achillea, Myriophyllon, Chiliophyllon, Militaris herba, Stratiotes, Carpentaria, Lumbus veneris, & Supercilium veneris. Achillæa Millefolium Linn. MILFOIL or YARROW: a plant with rough ſtiff leaves, divided into ſmall ſegments, ſet in pairs along a middle rib like feathers: the little flowers ſtand thick together in form of an umbel on the top of the ſtiff ſtalk, and conſiſt each of ſeveral whitiſh or pale purpliſh petala ſet round a kind of looſe diſk of the ſame colour, followed by ſmall crooked ſeeds. It is perennial, grows plentifully by the ſides of fields and on ſandy commons, and is found in flower greateſt part of the ſummer.

THE leaves and flowers of milfoil are greatly recommended by ſome of the German phyſicians *(a)* as mild corroborants, vulneraries, and antiſpaſmodics, in diarrhœas, hemorrhagies, hypochondriacal and other diſorders. They promiſe, by their ſenſible qualities, to be of no inconſiderable activity. They have an agreeable though weak aromatic ſmell, and a bitteriſh, roughiſh, ſomewhat pungent taſte. The leaves are chiefly directed for medicinal uſe, as having the greateſt bitteriſhneſs and auſterity: the flowers have the ſtrongeſt and moſt ſubtile ſmell, are remarkably acrid, and promiſe to be of moſt efficacy, if the plant has really any ſuch efficacy, as an anodyne or antiſpaſmodic. Dr. Grew obſerves, that the young roots have a glowing warm taſte, approaching to that of contrayerva, and thinks they might in ſome meaſure ſupply its place; but adds, that they loſe much of their virtue in being dried *(b)*, from whence it may be preſumed that their active matter is of another kind.

The virtue of the leaves and flowers is extracted both by watery and ſpirituous menſtrua; the aſtringency moſt perfectly by the former, their aromatic warmth and pungency by the latter, and both of them equally by a mixture of the two. The flowers, diſtilled with water, yield a penetrating eſſential oil, poſſeſſing the flavour of the milfoil in perfection,

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(a) Stahl, *Diſſert. de therapia paſſionis hypochondriacæ.* Hoffman, *De præſtantia remed. domeſt.* §. 18.

(b) Idea of philoſ. hiſt. of plants, §. 29. *Of diverſities of taſtes, chap.* v. §. 2.

though rather leſs agreeable than the flowers themſelves, in conſiſtence ſomewhat thick and tenacious, in colour remarkably variable, ſometimes of a greeniſh yellow, ſometimes of a deep green, ſometimes of a blueiſh green, and ſometimes of a fine blue: theſe differences ſeem to depend in great meaſure on the ſoil in which the plant is produced; the flowers gathered from moiſt rich grounds yielding generally a blue oil; whereas thoſe, which are collected from dry commons, afford only, ſo far as I have obſerved, a green one with a greater or leſs admixture of yellow: the decoction remaining after the ſeparation of this volatile principle, leaves, on being inſpiſſated, a dark browniſh maſs, ungratefully auſtere, bitteriſh, and ſomewhat ſaline. On inſpiſſating the yellowiſh tincture made in rectified ſpirit, ſcarcely any thing of the flavour of milfoil exhales or diſtils with the menſtruum: the remaining deep yellow extract is more agreeable in ſmell than the flowers themſelves, of a moderately warm penetrating taſte, ſomewhat like that of camphor, but much milder, accompanied with a ſlight bitteriſhneſs and ſubaſtringency.

MILLEPEDÆ.

MILLEPEDÆ Pharm. Lond. & Edinb. Centipedes & oniſci Quibuſdam. Oniſcus Aſellus Linn. MILLEPEDES, WOOD-LICE: an oblong inſect, with fourteen feet, and its body compoſed of fourteen rings, rolling itſelf up into a round ball on being touched; found in cellars, and under ſtones and logs of wood in cold moiſt places; rarely met with in the warmer climates. Two ſorts are commonly uſed indiſcriminately; one large, of a duſky blueiſh-black or livid colour; the other ſmaller, flatter, thinner, of a pale browniſh grey, and differing alſo from the former in the laſt diviſion of the body being not annular, but pointed, and in the tail being forked. The firſt ſpecies is ſaid to be the true officinal ſort, though ſome have preferred the ſecond: but there does not ſeem to be any material difference between them in quality.

MILLEPEDES have a faint diſagreeable ſmell, and a ſomewhat brackiſh, ſweetiſh, unpleaſant taſte. They are celebrated as reſolvents, aperients, and diuretics; in jaundices, aſthmas, ſcrophulous and other diſorders; but that their virtues are ſo great as they are generally ſuppoſed to be, may be juſtly queſtioned, at leaſt when given in the cuſtomary doſes. I have known two hundred taken every day for ſome time together, without producing any remarkable effect: in large doſes, indeed, it is probable that their activity may be conſiderable; as they are ſaid to have ſometimes produced an univerſal heat and thirſt with a pain in the region of the pubes*(a)*, and ſometimes a ſcalding of urine*(b)*.

Theſe inſects may be commodiouſly ſwallowed entire, as they ſpontaneouſly contract themſelves, on being touched, into the form of a pill. In the ſhops they are commonly reduced into powder; for which purpoſe they are prepared, by incloſing them in a thin canvas cloth, and ſuſpending them over hot ſpirit of wine in a cloſe veſſel, till they are killed by the ſteam and rendered friable. Of the extraction of their active matter by menſtrua, no direct experiments have been made: it is rather by expreſſion, than on the principle of extraction or diſſolution, that their virtues are commonly endeavoured to be obtained in a liquid form; though ſome liquors are generally added previouſly to the expreſſion, partly to improve their virtue for particular intentions, partly to preſerve the animal juice from corruption, and partly to render it more completely ſeparable. The college of Edinburgh directs two ounces of live millepedes to be ſlightly bruiſed, and digeſted for a night in a pint of rheniſh wine, after which the liquor is to be preſſed out through a ſtrainer.

Millepedæ præparatæ *Ph. L. & Ed.*

Vinum millepedatum *Pharm. Edin.*

MOLDAVICA.

MOLDAVICA ſeu Meliſſa turcica: an Meliſſa americana trifolia odore gravi Tourn. inſt.? Camphoroſma Moriſon. hiſt. ox.? Dracocephalum canarienſe Linn. TURKEY or rather CANARY BALM, commonly called BALM-OF-GILEAD: a plant with ſquare ſtalks, and acuminated leaves, ſlightly and obtuſely indented, ſet generally three on one pedicle: of each three, the end one is largeſt, and the other two are nipt at the bottom on the upper ſide, or do not reach ſo far down their middle ribs on that ſide as on the other: the pedicles ſtand in pairs at the joints, with ſimilar ſets of ſmaller leaves in their boſoms.

(a) Frid. Hoffman, *De mat. med. regn. animal. cap.* 18. *Opera omnia, ſuppl.* ii. *par.* iii. *p.* 157.

(b) Fuller, *Pharmacopœia extemporanea,* ſub *Expreſſ. milleped. ſimp.*

On the tops come forth thick ſpikes, or heads, of pretty large, reddiſh, labiated flowers; whereof both the upper and lower lip are cut into two parts, and the cup into five. It is perennial, a native of the Canary iſlands, and ſcarcely bears the winters of our climate without ſhelter.

This or ſome of the other ſpecies of the Turkey balm, of which there are ſeveral, is greatly commended by Hoffman, for ſtrengthening the tone of the ſtomach, and the nervous ſyſtem: in this country, it has not yet been, though it ſeems to have a good claim to be, received among the medicinal plants: infuſions of it may be drank as tea, and are very grateful. The leaves and flowery tops have a fragrant ſmell, ſomewhat reſembling that of balm, but far ſtronger, and approaching to that of the fine balſam from which the plant received its name. Their taſte is likewiſe agreeable, but ſo covered with the aromatic flavour, that its particular ſpecies is not eaſily determined: when the herb is infuſed in water, and the aromatic part diſſipated by inſpiſſating the filtered infuſion, the remaining extract impreſſes on the palate a moderately ſtrong, though only momentary, pungency and bitterneſs. In diſtillation with water, it yields a fragrant eſſential oil.

Ol. ſyriæ *Germanis quibuſdam.*

MOSCHUS.

MOSCHUS Pharm. Lond. & Edinb. Musk: an odoriferous, grumous ſubſtance: found in a little bag, ſituated near the umbilical region of an oriental quadruped, which is ſaid by ſome to bear the greateſt reſemblance to the goat, by others to the ſtag kind. The beſt muſk is brought from Tonquin in China, an inferiour ſort from Agria and Bengal, and a ſtill worſe from Ruſſia.

Fine muſk comes over in round thin bladders, generally about the ſize of pigeons eggs, covered with ſhort brown hairs, well filled, and without any aperture or any appearance of their having been opened. The muſk itſelf is dry, with a kind of unctuoſity; of a dark reddiſh brown or ruſty blackiſh colour; in ſmall round grains, with very few hard black clots; perfectly free from any ſandy or other viſible foreign matter. Chewed, and rubbed with a knife on paper, it looks bright, yellowiſh, ſmooth and free from grittineſs. Laid on a red-hot iron, it catches flame, and burns almoſt intirely away, leaving only an exceeding ſmall quantity of light greyiſh aſhes: if any earthy ſubſtances have been mixed with the muſk, the quantity of the reſiduum will diſcover them.

This concrete has a bitteriſh ſubacrid taſte; and a fragrant ſmell, agreeable at a diſtance, but ſo ſtrong as to be diſagreeable when ſmelt near to, unleſs weakened by a large admixture of other ſubſtances. A ſmall quantity, macerated for a few days in rectified ſpirit of wine, imparts a deep colour, and a ſtrong impregnation to the ſpirit: this tincture, of itſelf, diſcovers but little ſmell, the ſpirit covering or ſuppreſſing the ſmell; but on dilution it manifeſts the full fragrance of the muſk, a drop or two communicating to a quart of wine or watery liquors a rich muſky ſcent. The quantity of liquor which may thus be flavoured by a certain known proportion of muſk, appears to be the beſt criterion of the genuineneſs and goodneſs of this commodity; a commodity, which is not only ſaid to vary in goodneſs according to the ſeaſon of its being taken from the animal (a), but which is oftentimes ſo artfully ſophiſticated, that the abuſes cannot be diſcovered by any external characters, or by any other known means than the degree of its ſpecific ſmell and taſte, which the above experiment affords the moſt commodious method of meaſuring. The rectified ſpirit takes up completely the active matter of the muſk; watery liquors extract it only in part. The ſhops endeavour to procure an union of its virtues with water by the intervention of ſugar: twelve grains of muſk and a dram of fine ſugar are thoroughly ground together, and ſix ounces by meaſure of damaſk roſe water added by degrees: this intermedium, however, does not anſwer ſo effectually as could be wiſhed; the mixture, at firſt turbid, becoming clear on ſtanding for a little time, and depoſiting, along with the feculent matter, a great ſhare of the medicinal parts of the muſk: the moſt ſucceſsful medium for uniting muſk with water, appears to be mucilage of gum-arabic; but the moſt elegant of all the liquid preparations of this drug, is the tincture in rectified ſpirit, which may be occaſionally diluted with any watery liquors, like the other ſpirituous tinctures. By diſtillation, water becomes ſtrongly impregnated with the

Julepum e moſcho *P. L.*

(a) Strahlenberg, *Deſcript. Ruſſ. Siber.* &c. *p.* 340.

ſcent of the muſk, and ſeems to elevate all its odoriferous matter; while rectified ſpirit, on the contrary, brings over little or nothing of it.

Muſk, a medicine of great eſteem in the eaſtern countries, has lately come into general uſe among us alſo, in ſome nervous diſorders: though liable, by its ſtrong impreſſion on the organs of ſmell, to offend and diſorder hyſterical perſons and conſtitutions of great ſenſibility, yet, when taken internally, it is found to abate ſymptoms of that kind which its ſmell produces, and to be one of the principal medicines of the antiſpaſmodic claſs. Dr. Wall relates, that two perſons labouring under a ſubſultus tendinum, extreme anxiety, and want of ſleep, occaſioned by the bite of a mad dog, were perfectly relieved by two doſes of muſk of ſixteen grains each: that convulſive hiccups, attended with the worſt ſymptoms, were removed by a doſe or two of ten grains: but in ſome caſes, where this medicine could not, on account of ſtrong convulſions, be adminiſtered by the mouth, it proved of ſervice when injected as a glyſter: that he never met with any perſon, how averſe ſoever to perfumes, but could take it in the form of a bolus without inconvenience: that under the quantity of ſix grains, he never found much effect from it, but that when given to ten grains and upwards, it produces a mild diaphoreſis, without heating or giving any uneaſineſs, but on the contrary, abating pain and raiſing the ſpirits; and that after the ſweat has begun, a refreſhing ſleep generally ſucceeds*(a)*. This medicine is now received in general practice, in different convulſive diſorders; and its doſe has been increaſed, with advantage, to a ſcruple, and half a dram, every four or ſix hours. It has been tried alſo in ſome maniacal caſes; in which it ſeemed to procure a temporary relief.

MOXA.

MOXA ſive lanugo artemiſiæ japonicæ Pharm. Pariſ. MOXA: a ſoft lanuginous ſubſtance, prepared in Japan, from the young leaves of a ſpecies of mugwort, by beating them, when thoroughly dried, and rubbing them betwixt the hands, till only the fine fibres are left. A like ſubſtance is ſaid, in the German ephemerides, to have been obtained, by treating the leaves of our common mugwort in the ſame manner.

(a) Philoſoph. Tranſact. No. 474.

Moxa is celebrated in the eaſtern countries, for preventing and curing many diſorders, by being burnt on the ſkin: a little cone of moxa, laid on the part previouſly moiſtened, and ſet on fire at top, burns down with a temperate glowing heat, and produces a dark coloured ſpot, the exulceration of which is promoted by applying a little garlic, and the ulcer either healed up when the eſchar ſeparates, or kept running for a length of time, as different circumſtances may require. A fungous ſubſtance, found in fiſſures of old birch trees, is ſaid to be in common uſe among the Laplanders for the ſame purpoſes *(a)*; and ſome have uſed cotton, impregnated with a ſolution of nitre, and afterwards dried, which anſwers the end as effectually as the moxa of the Japoneſe *(b)*. It is obvious, that all theſe applications are no other than means of producing an exulceration of the ſkin, and its conſequence a drain of humours.

MYROBALANI.

MYROBALANI Pharm. Pariſ. Myrobalans: dried fruits, of the plum kind, brought from the Eaſt Indies. Five ſorts, produced by different trees, have been diſtinguiſhed in the ſhops.

1. Myrobalani bellíricæ: *Myrobalani rotundæ bellíricæ, arabibus belleregi, &c. C. B.* Belliric myrobalans: of a yellowiſh grey colour, and an irregularly roundiſh or oblong figure, about an inch in length, and three quarters of an inch thick.

2. Myrobalani citrinæ: *Myrobalani teretes citrini bilem purgantes C. B.* Yellow myrobalans: ſomewhat longer than the preceding; with generally five large longitudinal ridges, and as many ſmaller between them; ſomewhat pointed at both ends.

3. Myrobalani chebulæ: *Myrobalani maximi anguloſi pituitam purgantes, arabibus quebolia, &c. C. B.* Chebule myrobalans: reſembling the yellow in figure and ridges, but larger, of a darker colour inclining to brown or blackiſh, and with a thicker pulp.

(a) Linnæus. *Flora lapponica, p.* 264.

(b) Hagendorn, *Cynoſbatologia, p.* 74.

4. Myrobalani emblicæ, *arabibus embelgi, &c. C. B. Myrobalani emblicæ in ſegmentis nucleum habentes anguloſæ J. B.* Emblic myrobalans: of a dark blackiſh grey colour, roundiſh, about half an inch thick, with ſix hexagonal faces opening from one another; the fruit of the *Phyllanthus Emblica* of Linnæus.

5. Myrobalani indicæ: *Myrobalani nigræ octangulares C. B. Myrobalani indicæ nigræ ſine nucleis J. B.* Indian or black myrobalans: of a deep black colour, oblong, octangular, differing from all the others, in having no ſtone, or only the rudiments of one; from whence they are ſuppoſed to have been gathered before maturity.

All the myrobalans have an unpleaſant, bitteriſh, very auſtere taſte; and ſtrike an inky blackneſs with ſolution of chalybeate vitriol. They are ſaid to have a gently purgative, as well as an aſtringent and corroborating virtue; and are directed to be given, in ſubſtance from half a dram to four drams, and in infuſion or ſlight decoction from four to twelve drams. It is ſaid alſo, that the fruit in ſubſtance acts barely as a ſtyptic, without exerting its purgative quality; that this laſt is diſcovered only in the infuſions (a), and that by boiling it is diſſipated or deſtroyed (b). A difference of this kind, between the fruit and its infuſions, might be eaſily conceived, if the aſtringency of the myrobalans was not extracted by watery liquors, but the contrary of this was found on trial to be true; the infuſions, decoctions, and the decoctions inſpiſſated to the conſiſtence of an extract, being ſtrongly ſtyptic. In this country, they have long been entire ſtrangers to practice, and are now diſcarded, by the colleges both of London and of Edinburgh, from their catalogue of officinals.

MYRRHA.

MYRRHA Pharm. Lond. & Edinb. Myrrh: a gummy-reſinous concrete juice, of an oriental tree, of which we have no certain account. * Mr. Bruce informs us that it grows ſpontaneouſly in the eaſtern part of Arabia felix, and in that part of Abyſſinia which the Greeks named

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(a) Geoffroy, *Tract. de materia medica, tom.* ii. *p.* 332.

(b) Benancius, *Declaratio fraudum & errorum apud pharmacopœos, è muſeo Bartholini, p.* 68.

Troglodytria; and that the Abyſſinian myrrh, which is the leaſt plentiful, is the beſt. The beſt kind is that which flows from deep inciſions of the larger branches, hardening upon the tree. It continues to diſtil every year from the ſame wound; but the myrrh is of an inferiour quality after the firſt, being mixed with foreign impurities, and the decayed juices of the tree. The worſt is that which comes from near the root, or the old trunks (a). It comes over in glebes or drops, of various colours and magnitudes: the beſt ſort is ſomewhat tranſparent, friable, in ſome degree unctuous to the touch, of an uniform browniſh or reddiſh yellow colour, often ſtreaked internally with whitiſh ſemicircular or irregular veins; of a moderately ſtrong, not diſagreeable ſmell; and a lightly pungent, very bitter taſte, accompanied with an aromatic flavour, but not ſufficient to prevent its being nauſeous to the palate.

There are ſometimes found among it hard ſhining pieces, of a pale yellowiſh colour, reſembling gum-arabic, of no taſte or ſmell: ſometimes maſſes of bdellium, darker coloured, more opake, internally ſofter than the myrrh, and differing from it both in ſmell and taſte: ſometimes an unctuous gummy-reſin, of a moderately ſtrong ſomewhat ungrateful ſmell, and a bitteriſh very durable taſte, obviouſly different both from thoſe of bdellium and myrrh: ſometimes likewiſe, as Cartheuſer obſerves, hard compact dark coloured tears, leſs unctuous than myrrh, of an offenſive ſmell, and a moſt ungrateful bitterneſs, ſo as, when kept for ſome time in the mouth, to provoke reaching, though ſo reſinous, that little of them is diſſolved by the ſaliva. Great care is therefore requiſite in the choice of this drug.

THIS bitter aromatic gummy-reſin is a warm corroborant, deobſtruent, and antiſeptic. It is given from a few grains to a ſcruple and upwards, in uterine obſtructions, cachexies, putrid fevers, *&c.* and often employed alſo as an external antiſeptic and vulnerary. * In doſes of half a dram, Dr. Cullen remarks that it heated the ſtomach, produced ſweat, and agreed with the balſams in affecting the urinary paſſages. It has lately come more into uſe as a tonic in hectical caſes, and is ſaid to prove leſs heating than moſt other medicines of that claſs.

(a) *Philoſ. Tranſ.* Vol. LXV. *p.* 408.

Myrrh diſſolves almoſt totally in boiling water, but as the liquor cools, a portion of reſinous matter ſubſides. The ſtrained ſolution is of a dark yellowiſh colour, ſomewhat turbid, ſmells and taſtes ſtrongly of the myrrh, and retains both its taſte, and a conſiderable ſhare of its ſcent, on being inſpiſſated with a gentle heat to the conſiſtence of an extract. By diſtillation with a boiling heat, the whole of its flavour ariſes, partly impregnating the diſtilled water, partly collected and concentrated in the form of an eſſential oil; which is in ſmell extremely fragrant, and rather more agreeable than the myrrh in ſubſtance, in taſte remarkably mild, ſo ponderous as to ſink in the aqueous fluid, whereas the oils of moſt, perhaps of all, of the other gummy-reſins ſwim: the quantity of oil, according to Hoffman's experiments, is about two drams from ſixteen ounces, and when the myrrh is of a very good kind, near three drams.

Rectified ſpirit diſſolves leſs of this concrete than water, but extracts more perfectly that part in which its bitterneſs, flavour, and virtues, reſide: the reſinous matter, which water leaves undiſſolved, is very bitter; but the gummy matter, which ſpirit leaves undiſſolved, is inſipid, the ſpirituous ſolution containing all the active parts of the myrrh. Tinctures of myrrh, made by digeſting three ounces of the concrete in two pounds and a half of rectified† or a quart of proof‡ ſpirit, are kept in the ſhops, and given ſometimes internally from fifteen drops to a tea-ſpoonful, but oftener uſed among us externally for cleanſing ulcers and promoting the exfoliation of carious bones: both tinctures are of a reddiſh yellow colour. In diſtillation, rectified ſpirit brings over little or nothing of the flavour of the myrrh: the extract, obtained by inſpiſſating the tincture, is a fragrant, bitter, very tenacious reſin, amounting to one third or more of the weight of the myrrh employed.

Tinc. myrr.

† *Ph. Edinb.*
‡ *Ph. Lond.*

MYRTUS.

MYRTUS Pharm. Edinb.(a) *Myrtus communis italica Caſp. Bauhin. Myrtus communis Linn.* MYRTLE: an evergreen ſhrub; with oblong leaves, pointed at both ends; in the boſoms of which ſpring ſolitary white pentapetalous flowers, followed by black oblong umbilicated berries full of white crooked ſeeds. It is a native of the ſouthern parts of Europe, from whence the ſhops have been uſually ſupplied with the berries, called *myrtilli,* which rarely come to perfection in our climate; nor does the ſhrub bear our ſevere winters without ſhelter.

(a) Expunged.

The berries of the myrtle, recommended in alvine and uterine fluxes and other diſorders from relaxation and debility, appear to be among the milder reſtringents or corroborants: they have a roughiſh not unpleaſant taſte, accompanied with a degree of ſweetiſhneſs and aromatic flavour. The leaves have likewiſe a manifeſt aſtringency, and yield, when rubbed, a pretty ſtrong aromatic ſmell, agreeable to moſt people.

MYRTUS BRABANTICA.

MYRTHUS BRABANTICA Pharm. Pariſ. Rhus myrtifolia belgica C. B. Gale, frutex odoratus ſeptentrionalium, elæagnus Cordo, chamælæagnus Dodonæo J. B. Myrica Gale Linn. GAULE, SWEET WILLOW, DUTCH MYRTLE: a ſmall ſhrub, much branched; with oblong, ſmooth, whitiſh green leaves, ſomewhat pointed or converging at each end; among which ariſe pedicles bearing flowery tufts, and ſeparate pedicles bearing ſcaly cones which include the ſeeds, one little ſeed being lodged in each ſcale. It grows wild in waſte watery places in ſeveral parts of England: in the iſle of Ely it is ſaid to be very plentiful. It flowers in May or June, ripens its ſeeds in Auguſt, and loſes its leaves in winter.

The leaves, flowers, and ſeeds of this plant, have a ſtrong fragrant ſmell, and a bitter taſte. They are ſaid to be uſed among the common people, for deſtroying moths, and cutaneous inſects, being accounted an enemy to inſects of every kind; internally, in infuſions, as a ſtomachic and vermifuge; and, as a ſubſtitute to hops, for preſerving malt liquors, which they render more inebriating, and of conſequence leſs ſalubrious *(a)*: it is ſaid that this quality is deſtroyed by boiling *(b)*.

(a) Ray, *Hiſtoria plantarum, tom.* ii. *p.* 1707. *(b)* Linnæi, *Amœn. Academic.* iii. 96.

NAPUS.

NAPUS.

NAVEW: a plant of the turnep kind, with oblong roots growing ſlenderer from the top to the extremity. Two ſorts of it, ranked among the articles of the materia medica, are ſuppoſed by Linnæus to be only varieties, and are therefore joined into one ſpecies, under the name of *braſſica (napus) radice cauleſcente fuſiformi.* They are both biennial.

1. NAPUS; *napus dulcis officinarum Pharm. Lond. Napus ſativa C. B.* Garden or ſweet navew, or French turnep: cultivated for the culinary uſe of its roots, which are warmer and more grateful than thoſe of the common turnep, and are ſaid to afford likewiſe, in their decoctions, a liquor beneficial in diſorders of the breaſt. The ſeeds, in figure roundiſh and in colour reddiſh, are the part principally directed for medicinal purpoſes: they have a moderately pungent taſte, ſomewhat approaching to that of muſtard ſeed, of the virtues of which they appear to partake: with muſtard ſeed they agree alſo in their pharmaceutic properties, their pungent matter being taken up completely by water, and only partially by rectified ſpirit, and being diſſipated in the inſpiſſation of the watery infuſion, only an unpleaſant bitteriſhneſs remaining in the extract. As the navew ſeeds, nearly ſimilar in kind to thoſe of muſtard, are apparently much inferiour in degree, the college of Edinburgh has diſcarded them, and that of London retains them only as an ingredient in theriaca.

2. BUNIAS *Pharm. Pariſ. Napus ſilveſtris C. B.* Wild navew, or rape: growing on dry banks and among corn: with leaves ſomewhat different from thoſe of the preceding, being more like thoſe of cabbages than of turneps; the root ſmaller, and of a ſtronger unpleaſant taſte; and the ſeeds alſo rather more pungent, on which account they are preferred by the faculty of Paris. The ſeeds of both kinds yield upon expreſſion a large quantity of oil: the oil called rape-oil is extracted from the ſeeds of the wild ſort, which is cultivated in abundance, for that uſe, in ſome parts of England; the cake, remaining after the expreſſion of the oil, retains, like that of muſtard, the acrimony of the ſeeds.

NARDUS CELTICA.

NARDUS CELTICA Pharm. Lond. Nardus celtica dioſcoridis C. B. Valeriana celtica Tourn. & Linn. Spica celtica & ſaliunca quibuſdam. CELTIC NARD: a ſmall ſpecies of valerian, with uncut, oblong, obtuſe, ſomewhat oval leaves. It is a native of the Alps, from whence the ſhops have been generally ſupplied with the dried roots, conſiſting of a number of blackiſh fibres, with the lower parts of the ſtalks adhering; which laſt are covered with thin yellow ſcales, the remains of the withered leaves.

THIS root has been recommended as a ſtomachic, carminative, and diuretic: at preſent, it is ſcarcely otherwiſe made uſe of, in this country, than as an ingredient in mithridate and theriaca, though its ſenſible qualities promiſe ſome conſiderable medicinal powers. It has a moderately ſtrong ſmell, of which it is extremely retentive*(a)*, and a warm bitteriſh ſubacrid taſte, ſomewhat reſembling thoſe of common wild valerian: an extract made from it by rectified ſpirit has a ſtrong penetrating taſte, and retains in good meaſure the particular flavour, as well as the bitterneſs and pungency of the root.

NARDUS INDICA.

NARDUS INDICA Pharm. Lond. Nardus indica quæ ſpica, ſpica nardi, & ſpica indica officinarum C. B. INDIAN NARD, or SPIKENARD: the buſhy top of the root, or the remains of the withered ſtalks and ribs of the leaves, of an Indian graſſy-leaved plant of which we have no particular deſcription. The nard, as brought to us, is a congeries of ſmall tough reddiſh brown fibres; cohering cloſe together, but not interwoven, ſo as to form a bunch or ſpike about the ſize of a finger: ſometimes two or three bunches iſſue from one head, and ſometimes bits of leaves and ſtalks in ſubſtance are found among them.

THE Indian nard, now kept in the ſhops chiefly as an ingredient in the mithridate and theriaca, was formerly employed in the ſame intentions as

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(a) Linnæus obſerves that this plant, in a dry herbal, has retained its fragrance above a century. *Amænitat. Academic. vol.* iii. *p.* 71.

the Celtic, and is ſaid to be uſed among the orientals as a ſpice. It is moderately warm and pungent, accompanied with a flavour not diſagreeable.

NASTURTIUM AQUATICUM.

NASTURTIUM AQUATICUM Ph. Lond. & Edinb. Naſturtium aquaticum ſupinum C. B. Siſymbrium aquaticum Tourn. Creſſio quibuſdam. Siſymbrium Naſturtium aquaticum Linn. WATER CRESSES: a juicy plant, with browniſh, oblong, obtuſe leaves, ſet nearly in pairs, without pedicles, on a middle rib, which is terminated by an odd one larger and longer-pointed than the reſt: the ſtalks are hollow, pretty thick, channelled, and crooked: on the tops grow tufts of ſmall tetrapetalous white flowers, followed by oblong pods, which burſting throw out a number of roundiſh ſeeds. It grows in rivulets and the clearer ſtanding waters, and flowers in June: the leaves remain green all the winter, but are in greateſt perfection in the ſpring.

THE leaves of the water creſſes have a moderately pungent taſte; and, when rubbed betwixt the fingers, emit a quick penetrating ſmell, like that of muſtard ſeed, but much weaker. Their pungent matter is taken up both by watery and ſpirituous menſtrua, and accompanies the aqueous juice which iſſues copiouſly upon expreſſion: it is very volatile, ſo as to ariſe, in great part, in diſtillation with rectified ſpirit as well as with water, and almoſt totally to exhale in drying the leaves, or inſpiſſating by the gentleſt heat, to the conſiſtence of an extract, either the expreſſed juice, or the watery, or ſpirituous tinctures: both the inſpiſſated juice and the watery extract diſcover to the taſte a ſaline impregnation, and in keeping throw up cryſtalline effloreſcences to the ſurface. On diſtilling with water conſiderable quantities of the herb, a ſmall proportion of a ſubtile, volatile, very pungent eſſential oil is obtained.

This herb is one of the milder acrid, aperient, antiſcorbutics; of the ſame general virtues with the *cochlearia*, but conſiderably leſs pungent, and in great meaſure free from the peculiar flavour which accompanies that plant. Hoffman has a great opinion of it, and recommends it as of ſingular efficacy for ſtrengthening the viſcera, opening obſtructions of the glands, promoting the fluid ſecretions, and purifying the blood

and

and humours: for theſe purpoſes, the herb may be uſed as a dietetic article, or the expreſſed juice taken in doſes of from one to four ounces twice or thrice a day.

NASTURTIUM HORTENSE.

NASTURTIUM HORTENSE Pharm. Edinb.(a) *Naſturtium hortenſe vulgatum C.B. Lepidium ſativum Linn.* GARDEN CRESSES: a low plant, with variouſly cut winged leaves, bearing on the top of the round ſtalk and branches tufts of tetrapetalous white flowers, which are followed by roundiſh capſules, flatted on one ſide, full of reddiſh round ſeeds. It is annual, and raiſed in gardens.

THE garden creſs is an uſeful dietetic herb in ſcorbutic habits, viſcidities of the juices, obſtructions of the viſcera, and for promoting digeſtion; nearly of the ſame quality with water creſs, but ſomewhat milder. The ſeeds are conſiderably more pungent than the leaves, and agree in their general qualities with thoſe of muſtard.

NATRON.

NATRON, Anatron, Soude blanche, Pharm. Pariſ. Nitrum antiquorum. Aphronitrum. Baurach. NATRON, or MINERAL FIXT ALKALINE SALT. This ſalt is contained in great abundance in the waters of the ocean, and makes the baſis of the neutral ſalt ſo plentifully extracted from them for alimentary uſes. It is likewiſe diſcoverable in ſundry mineral ſprings, even of thoſe which do not participate of ſea ſalt. The celebrated Seltzer waters, in the archbiſhoprick of Treves, appear to be no other than a dilute ſolution of this ſalt mixed with a little earthy matter: twelve ounces of the water, according to Hoffman's analyſis, yield a ſcruple of the pure alkali. In ſome of the eaſtern countries it is found in conſiderable quantities on the ſurface of the earth, ſometimes pure, but more commonly blended with various heterogeneous matters, from which it is extracted by means of water. I have been favoured by Dr. Heberden with a ſample of this ſalt in a very pure ſtate, which was taken up on the Pic of Teneriffe, and with which ſome parts of that mountain are covered. An account of this ſalt, as found foſſil in a cryſtalline ſtate, in the country of Tripoli, is contained in the *Phil. Tranſ.* Vol. LXI. Part II. The alkali called *ſoda*, or *barilla*, prepared by incinerating the maritime plant kali or glaſſwort, contains a ſalt of the ſame kind.

(a) Expunged.

The mineral alkali agrees in its general qualities with the common lixivial ſalts of vegetables. The differences which have been obſerved are, that it is milder and leſs acrid in taſte: that it melts eaſier in the fire, and requires more water for its ſolution: that when diſſolved in water it concretes, on evaporation, into cryſtalline maſſes: that when expoſed to a moiſt air, though it grows ſomewhat moiſt on the ſurface, it does not run into a liquid form: that in a dry air, the cryſtals loſe the water neceſſary for their cryſtalline form, and fall by degrees into a white powder: that the neutral ſalt, reſulting from its coalition with the vitriolic acid, *ſal glauberi*, is very eaſily diſſoluble in water and fuſible in the fire: that with the nitrous acid it forms cubical cryſtals, *nitrum cubicum*; with the marine, perfect ſea ſalt; with tartar, a ſalt which eaſily cryſtallizes, *ſal rupellenſe*. Made cauſtic by lime, it proves greatly inferiour to the vegetable alkali in diſſolving the urinary calculus. (a).

This ſalt appears to poſſeſs the ſame general virtues with the vegetable alkalies; but as it does not liquefy in the air, it is better adapted for an ingredient in powders; and as it is leſs acrimonious, it may be preſumed to be leſs diſpoſed to ſtimulate the firſt paſſages: ſome of the chemiſts have taken great pains, in the preparation of the common alkalies, to preſerve in them a part of the oil of the plant, ſo as to reduce them to ſuch a degree of mildneſs, as this alkali, with much greater uniformity and certainty, poſſeſſes in its pure ſtate.

NEPETA.

NEPETA Pharm. Lond. Mentha cataria vulgaris, & major C. B. Cataria & Herba felis quibuſdam. Nepeta Cataria Linn. NEP, or CATMINT, ſo called from its being often deſtroyed by cats: a hoary plant; with ſquare ſtalks; heart-ſhaped, acuminated, ſerrated leaves, ſet in pairs on long pedicles; and whitiſh labiated flowers ſtanding in ſpikes on the tops of the branches: the upper lip of the flower is divided into two, the lower into three ſections. It is ſometimes found wild in hedges and on dry banks, and flowers in June.

(a) *Med. Tranſ.* i. 124.

The leaves of catmint have a moderately pungent aromatic taſte, and a ſtrong ſmell, not ill reſembling that of a mixture of ſpearmint and pennyroyal; of the virtues of which herbs, in weakneſſes of the ſtomach, and more particularly in uterine diſorders, they appear alſo to participate. Their active matter is extracted both by water and rectified ſpirit, moſt perfectly by the latter: the watery tinctures are of a greeniſh yellow or browniſh colour, the ſpirituous of a deep green. In diſtillation with water, they yield a yellowiſh eſſential oil, ſmelling ſtrongly of the catmint, but rather leſs agreeable than the herb itſelf: the remaining decoction is ungratefully bitteriſh and ſubaſtringent. Rectified ſpirit elevates likewiſe a part of the ſmell and aromatic warmth, but leaves the greateſt ſhare behind concentrated in the extract, which proves more grateful than the leaves in ſubſtance, having more of the mint and leſs of the pennyroyal flavour.

NEPHRITICUM LIGNUM.

NEPHRITICUM LIGNUM Pharm. Edinb.(a) *Lignum peregrinum aquam cæruleam reddens C. B.* Nephritic wood: an American wood, brought to us in large compact ponderous pieces, without knots: the outer part is of a whitiſh or pale yellowiſh colour, the medullary ſubſtance of a dark browniſh or reddiſh. It is the product of the *Guilandina Moringa* of Linnæus. This wood, macerated in water for half an hour or an hour, imparts a deep tincture, appearing, when placed betwixt the eye and the light, of a golden colour, in other ſituations of a fine blue: a property in which it agrees with the bark of the aſh tree, and differs from all other known woods. Pieces of a different kind of wood, are often mixed with it, which give only a yellow tincture to water.

(a) Expunged.

Nephritic wood has a ſlightly bitteriſh ſomewhat pungent taſte; and in raſping or ſcraping emits a faint ſmell of the aromatic kind. The blue watery tincture has neither ſmell nor taſte: but a ſtrong infuſion, which appears not blue, but of a dark browniſh colour, is manifeſtly bitter, and ſmells pretty agreeably; inſpiſſated, it leaves a blackiſh brown extract, in which the bitterneſs is more conſiderable, and accompanied with a ſlight aſtringency. A ſaturated tincture made in rectified ſpirit, is of a blackiſh red colour: the extract, obtained by inſpiſſating it, is a tenacious reſin, larger in quantity and weaker in taſte than the watery extract. According to Cartheuſer, the ſpirituous extract amounts to about one fifth, the watery only to one twelfth the weight of the wood. Both menſtrua ſeem to extract the whole of the active matter; for if the wood remaining after the action of the one, be digeſted or boiled in the other, and the liquors inſpiſſated, the extracts thus obtained have neither ſmell nor taſte.

This wood ſtands greatly recommended in difficulties of urine, nephritic complaints, and all diſorders of the kidneys and urinary paſſages; and is ſaid to have this peculiar advantage, that it does not, like the warmer diuretics, heat or offend the parts: the blue aqueous tincture is directed to be uſed as common drink, and freſh water to be poured on the remaining wood ſo long as it communicates any blueneſs. For my own part, I have never known its being given medicinally, nor is it received in practice: Geoffroy ſays he has ſeen ſome inſtances of its being uſed without ſucceſs; and indeed, whatever may be the virtues of ſtrong infuſions or extracts of the wood, the exceedingly dilute blue tincture cannot be expected to have much efficacy.

NICOTIANA.

TOBACCO: a plant with alternate leaves, and monopetalous tubulous flowers divided into five ſections: the flower is followed by an oval capſule, which opening longitudinally, ſheds numerous ſmall ſeeds.

1. Nicotiana *Pharm. Lond.* *Nicotiana major latifolia C. B.* *Nicotiana Tabacum Linn.* Tobacco: with large, ſharp-pointed, pale green, ſoft leaves, about two feet in length, joined immediately to the ſtalk without pedicles. It was brought into Europe by M. Nicot,

from the iſland Tobago in America, about the year 1560, and is now cultivated for medicinal uſe in our gardens. It is perennial, as is ſaid, in America; and annual with us.

The leaves of tobacco have a ſtrong diſagreeable ſmell, and a very acrid burning taſte. They give out their acrid matter both to water and ſpirit, moſt perfectly to the latter: the aqueous infuſions are of a yellow or brown colour, the ſpirituous of a deep green. They yield nothing conſiderable in diſtillation with either menſtruum: nevertheleſs their acrimony is greatly abated in the inſpiſſation of the tinctures, the watery extract being leſs pungent than the leaves themſelves, and the ſpirituous not much more ſo. The ſeveral ſorts of tobacco brought from abroad, are ſtronger in taſte than that of our own growth, and the extracts made from them much more fiery, but in leſs quantity.

Tobacco taken internally, even in a ſmall doſe, or decoctions of it uſed as a glyſter, prove virulently cathartic and emetic, occaſioning extreme anxiety, vertigoes, ſtupors, and diſorders of the ſenſes: ſome have nevertheleſs ventured upon it both as an evacuant, and in minuter quantities as an aperient and alterant, in epilepſies and other obſtinate chronical diſorders; a practice which, though in ſome caſes it may have been ſucceſsful, appears much too hazardous to be followed, particularly in the more irritable, hot, dry, bilious conſtitutions. By long boiling in water, its deleterious power is abated, and at length deſtroyed: an extract made by long coction is recommended by Stahl and other German phyſicians, as the moſt effectual and ſafe aperient, detergent, expectorant, diuretic, *&c.* but the medicine muſt neceſſarily be precarious and uncertain in ſtrength, and has never come into uſe among us.

The ſmoke of tobacco, received by the anus, is ſaid to be of ſingular efficacy in obſtinate conſtipations of the belly. Hoffman obſerves, that horſes have often been relieved by this remedy, but in human ſubjects it has been rarely tried; and ſays he has known ſome of the common people, who laboured under excruciating pains of the inteſtines, freed in an inſtant from all pain by ſwallowing the ſmoke. * Both the decoction and the ſmoke have not unfrequently been injected in caſes of incarcerated herniæ, and often with ſucceſs. The ſmoke thus applied is recommended as one of the principal means for the revival of perſons apparently dead from drowning or other ſudden cauſes; but ſome ſuſpect the narcotic powers of tobacco, as unfavourable in theſe caſes.

Tobacco is ſometimes employed externally in unguents and lotions, for cleanſing foul ulcers, deſtroying cutaneous inſects, and other like purpoſes: it appears to be deſtructive to almoſt all kinds of inſects, to thoſe produced on vegetables as well as on animals. Beaten into a maſh with vinegar or brandy, it has ſometimes proved a ſerviceable application for hard tumours of the hypochondres *(a)*. Some caution however is requiſite even in theſe external uſes of tobacco, particularly in ſolutions of continuity: there are inſtances of its being thus tranſmitted into the blood, ſo as to produce virulent effects. Of the common uſes of the leaves brought from America, prepared in different forms, both the advantages and inconveniences are too well known to require being mentioned here.

2. NICOTIANA MINOR *C. B.* *Priapeia quibuſdam nicotiana minor J. B.* *Tobacco anglicum Park.* *Hyoſcyamus luteus Ger.* *Nicotiana ruſtica Linn.* Engliſh tobacco: with ſhort, ſomewhat oval leaves, ſet on pedicles. It is annual, originally a native of America, but now propagates itſelf plentifully in England and other parts of Europe.

THE leaves of this ſpecies are ſaid by ſome to be of the ſame quality with thoſe of henbane; by others, to be ſimilar to the preceding, but weaker, which, in point of taſte, they manifeſtly are. They have been ſometimes ſubſtituted, in our markets, to the true tobacco; from which they are readily diſtinguiſhable by their ſmallneſs, their oval ſhape, and their being furniſhed with pedicles.

NITRUM.

NITRUM Pharm. Lond. & Edinb. NITRE, or SALTPETRE: a neutral ſalt, formed by the coalition of the common vegetable fixt alkaline ſalt with a peculiar acid: of a ſharp penetrating cooling taſte: ſoluble in eight times its weight of very cold water, in leſs than thrice its weight of water temperately warm, and, as is ſaid, in one third its weight of

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(a) Edinburgh medical eſſays, vol. ii. *art.* 5.

boiling water: concreting from its ſaturated ſolutions, on evaporation of a part of the fluid or a gradual diminution of the heat that kept it diſſolved, into colourleſs tranſparent cryſtals, which in figure are hexagonal priſms terminated by pyramids of the ſame number of ſides: melting thin as water in a moderate heat: when heated to ignition, deflagrating, on the contact of any inflammable ſubſtance, with a bright flame and a conſiderable hiſſing noiſe; and leaving, after the detonation, its fixed alkaline ſalt, the acid being deſtroyed in the act of accenſion.

Nitrum fixum

The origin of nitre, or rather of the acid which makes the characteriſtic part of nitre, is unknown. Thus much only is known with certainty, that common waters, both atmoſpherical and ſubterraneous, often contain a little of this acid in combination with earthy or other bodies, ſo as to yield, by cryſtallization, on ſupplying the vegetable fixt alkali, a perfect nitre: and that when animal and vegetable ſubſtances, mixed with porous abſorbent earths, have lain expoſed to the air till they are thoroughly rotted, they are found in like manner to contain a ſmall portion of nitre or of nitrous acid, ſo as to give out a little nitre to water, either without addition, or on being ſupplied with the proper alkaline baſis. On this foundation, ſome nitre is prepared in different parts of Europe: but the greateſt quantities are the produce of the Eaſt Indies; the means by which it is there ſo plentifully obtained, or whether it is a natural or artificial production, have not yet, ſo far as I can learn, been revealed.

Nitre, as brought into the ſhops, has generally a greater or leſs admixture of ſea ſalt; from which it is purified, by diſſolving it in boiling water, and, after duly evaporating the filtered ſolution, ſetting it in a cold place to cryſtallize. The more impure brown nitre requires repeated diſſolution and cryſtallization: to promote the purification, it is commonly diſſolved in lime-water, or the ſolution ſuffered to percolate through quicklime or a mixture of quicklime and wood aſhes. It is obſervable that nitrous ſolutions differ from thoſe of moſt other ſalts in contracting no pellicle in evaporation: if a ſolution of rough nitre, containing ſea ſalt, be boiled down till a pellicle appears, or till a part of the ſalt begins to concrete and fall to the bottom, all that thus ſeparates is ſaid to be ſea ſalt, boiling water keeping far leſs of this ſalt diſſolved than it does of nitre: but if the liquor be now poured off, though it ſhould ſtill retain a quantity of the ſea ſalt, only the nitre will cryſtallize in cooling,

Nitrum purificatum *Pharm. Lond.*

ſea ſalt continuing diſſolved in nearly as little water when cold, as was ſufficient to keep it diſſolved when boiling.

This ſalt is one of the principal medicines of the antiphlogiſtic claſs; of general uſe in diſorders accompanied with inflammatory ſymptoms whether chronical or acute, and as a corrector of the inflammation or irritation produced by ſtimulating drugs. Hoffman thinks it has an advantage above the refrigerants of the acid kind, in not being liable to coagulate the animal juices; ſolutions of it mingling with or diſſolving recent thick blood, and in ſome degree preſerving it from coagulation as well as corruption; at the ſame time changing its colour, when dark or blackiſh, to a crimſon, an effect which it produces alſo, in a leſs degree, upon the fleſhy parts of dead animals *(a)*. It retards likewiſe the coagulation of milk, but ſeems, from Stahl's account, to increaſe the conſiſtence of thin ſerous humours; for he obſerves, that when uſed in gargariſms for inflammations of the fauces in acute fevers, it thickens the ſalival fluid into a mucus, which keeps the parts moiſt for a conſiderable time, whereas, when nitre is not added, a dryneſs of the mouth preſently enſues *(b)*.

This medicine generally promotes urine, and often gives relief in ſtranguries and heat of urine whether ſimple or proceeding from a venereal taint. It ſometimes looſens the belly, particularly in hot diſpoſitions: in cold phlegmatic temperaments it rarely has this effect, though given in very large doſes: the diarrhœas of acute diſeaſes, and fluxes in other circumſtances from an acrimony of the bile or inflammation of the inteſtines, have been frequently reſtrained by it. In high fevers, it often promotes a diaphoreſis or ſweat; in malignant fevers, where the pulſe is low and the ſtrength greatly depreſſed, it impedes that ſalutary excretion and the eruption of the exanthemata; in conſequence of its general power of diminiſhing inflammation and heat. It ſeems to be prejudicial in diſorders of the lungs, though ſome *(c)* have ventured to preſcribe it in hæmoptyſes.

(a) Hoffman, *De ſalium mediorum virtute*, §. 16. *De medicamentis ſelectioribus*, §. 13. *De præſtantiſſima nitri virtute*, §. 5.—We cannot, however, conclude much, from theſe kinds of experiments, in regard to the medical powers of nitre, or its effects on the animal fluids whilſt under the laws of the vital œconomy.

(b) *De uſu nitri medico, Menſis martius, Opuſc. p.* 569.

(c) Riverius, *Cent.* i. *obſ.* 83. Stahl, *ubi ſupra, & Obſerv. chym. phyſ. med. curioſ. p.* 464. Tralles, *Virium terreis aſcriptorum examen, p.* 246. Dickſon, *Lond. med. obſ.* iv. 106. This laſt writer ventures to aſſert, that he can depend upon an electuary of conſerve of roſes and nitre in the cure of an hæmoptoë almoſt equally with bark in an intermittent.

The uſual doſe of nitre, among us, is from two or three grains to a ſcruple; though in many caſes it may be given with great ſafety, and to better advantage, in larger quantities. It has been ſaid, that nitre loſes, in being melted, half its weight of watery moiſture, and recovers this weight again on being diſſolved and cryſtallized(*a*); from whence it would follow, that one part of melted nitre is equivalent to two of the cryſtals: but there was probably ſome miſtake in this experiment, for I have repeated it with different parcels of nitre, and never found the loſs to be ſo much as one twentieth of its weight.

Trochiſci e nitro *Ph. L.*

Nitre may be commodiouſly taken in the form of troches; one part of the purified ſalt is commonly ground with three parts of fine ſugar, and the mixture made up with mucilage of gum tragacanth. In this and all other ſolid forms it is accompanied, however, with one inconvenience; being liable, eſpecially when the doſe is conſiderable, to occaſion a pain or uneaſineſs at the ſtomach, which can be prevented only by plentiful dilution. A liquid form is therefore, in general, the moſt eligible, and may be eaſily rendered grateful by a proper addition of ſugar.

Sal prunellæ
Cryſtallus mineralis.

Sal polychreſt *Ph. E.*

The chemiſts have thought to improve the virtue of nitre, by deflagration with a ſmall portion of ſulphur: they melt the nitre, in a crucible, and gradually ſprinkle on it one twenty-fourth its weight of flowers of ſulphur: when the deflagration is over, they pour out the melted ſalt into clean, dry, warm braſs moulds, ſo as to form it into little cakes. In this proceſs, a part of the acid of the nitre, and the inflammable principle of the ſulphur, detonating together, are both deſtroyed; while that part of the alkali of the nitre, which is thus forſaken by its acid, unites with the acid of the ſulphur, which is the ſame with that of vitriol, into a new neutral ſalt, the ſame with vitriolated tartar; and the preparation is found to be no other than a mixture of unchanged nitre with a ſmall portion of this vitriolated ſalt. If the nitre and ſulphur be taken in equal quantities, the mixture injected by a little at a time into a red-hot crucible, and kept in till all detonation ceaſes, nearly the whole of the nitre will thus be changed; and the remaining ſalt, purified by ſolution in water, proves almoſt wholly the ſame with vitriolated tartar.

The ſame ſalt is produced by pouring gradually on nitre the pure acid of vitriol or ſulphur: this acid, uniting with the alkali, diſengages the

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(*a*) Geoffroy, *Memoires de l'acad. des ſcienc. de Paris, pour l'ann.* 1717.

acid of the nitre, which begins to exhale, immediately on mixture, in yellow or red fumes, and may be collected by diſtillation in a glaſs retort with a moderate fire. Two parts of nitre to one of vitriolic acid, is a proper proportion for diſengaging all the acid of the nitre; the remaining ſalt is nearly a pure vitriolated tartar. If three parts of nitre be uſed to one of the vitriolic acid, a part of the nitre remains unchanged: on diſſolving the whole reſiduum in hot water, and ſetting the filtered ſolution to cryſtallize, the vitriolated ſalt ſhoots firſt, greateſt part of the nitre continuing diſſolved.

Acidum nitroſum vulgo ſpiritus nitri glauberi *Ph. E.*
Spir. nitri glauberi *Ph. Lond.*
Nitrum vitriolatum *Ph. Lond.*

The nitrous ſpirit is obtained alſo by diſtillation in a ſtrong fire with vitriol in ſubſtance; the vitriol parting, when ſtrongly heated, with its own acid, which then acts upon the nitre and extricates its acid in the ſame manner as when the pure vitriolic acid is uſed. The ſpirit thus diſtilled, called aqua fortis, is more phlegmatic than the preceding, in proportion as the vitriol employed contains more phlegm than the oil of vitriol: it is likewiſe liable to an admixture of the vitriolic acid, more or leſs of which is generally forced over. The proportion directed by the London college is three parts of nitre, three of green vitriol uncalcined, and one and a half of the ſame vitriol calcined. The ingredients are well mixed together, the diſtillation performed in an earthen retort or an iron pot fitted with an earthen head and a receiver, and continued ſo long as any red vapours ariſe. * The college of Edinburgh has now diſcarded this kind of preparation, and directs a weaker nitrous acid to be made by mixing equal parts of the ſtrong acid and pure water.

Aqua fortis *Phar. Lond.*

Acidum nitroſum tenue *Ph. Ed.*

The nitrous ſpirit, uſually diſtilled from rough nitre, contains often an admixture of the marine acid as well as of the vitriolic. The firſt is diſcovered, and ſeparated, by dropping in a little ſolution of ſilver, the latter by a ſolution of chalk or any other calcareous earth, made in the pure nitrous acid; the ſilver abſorbing the marine acid, and the chalk the vitriolic, and forming with thoſe acids, reſpectively, indiſſoluble concretes, which immediately render the liquor milky, and on ſtanding ſettle to the bottom. The ſolutions are to be cautiouſly and ſlowly dropt in, ſo long only as they continue to produce a milkineſs: in caſe of an exceſs in their quantity, if the ſpirit is required perfectly pure, it is to be rectified by rediſtillation.

By the property on which the above method of purification depends, the nitrous ſpirit may be readily diſtinguiſhed from the other two mineral acids. By the red or yellowiſh red colour of its fumes; by its forming with one fourth its weight of ſal ammoniac, or with ſea ſalt or its acid, a menſtruum that perfectly diſſolves gold; by its deflagrating on the contact of any inflammable matter, when heated to ignition, whatever other body it be previouſly combined with; it may with certainty be diſtinguiſhed both from thoſe and from every other known ſpecies of acid.

This acid has been ſometimes given as a diuretic, from two or three to fifty drops, diluted largely with water; but its principal uſe is in combination with other bodies.

Combined with vegetable fixt alkalies, it reproduces common nitre. With the mineral fixt alkali, or *ſoda*, it compoſes a ſpecies of nitre in ſome reſpects different from the common, cryſtallizing not into a priſmatic but a cubical figure; with volatile alkalies, a ſubtile pungent ſalt remarkable for its ſolubility in ſpirit of wine:*(a) of theſe two compounds, the medicinal qualities are little known, though they ſhould ſeem to be well deſerving of enquiry. The acid, in the moſt concentrated ſtate in which it is commonly met with, ſaturates about five ſixths its weight of vegetable fixt alkali (b).

Nitrum cubicum.

Nitrum flammans, volatile, ſive ammoniacale.

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*(a) NITRUM FLAMMANS, VOLATILE, AMMONIACALE. This ſalt diſſolves readily in water, and becomes pappy or fluid in a moiſt air: by ſlow evaporation in gentle warmth it ſhoots into large cryſtals, much reſembling thoſe of common nitre. It diſſolves in ſix times its weight, or leſs, of rectified ſpirit of wine. In a heat equal to that of boiling water, it melts and looks like oil, without ſuffering any loſs of its ſubſtance; on increaſing the heat a very little beyond that degree, it begins to exhale, and in a little time is wholly diſſipated: the fumes, caught in proper veſſels, condenſe not into a concrete ſalt, but a fluid ſpirit; in which, however perfect the neutralization was at firſt, the acid appears now to prevail. The ſalt thrown into a red-hot crucible, without addition of any inflammable matter, emits bright flames, without detonation or noiſe: the flaſhes continue to play on the ſurface till the whole quantity of the ſalt is diſſipated.

This ſalt is in taſte ſimilar to common nitre, but ſomewhat ſharper or more penetrating. Taken in doſes of from ten to twenty-five grains, it ſenſibly promotes urine; and if the patient is kept warm, perſpiration or ſweat. It is recommended by Kurella, preferably to the other neutral ſaline medicines, in inflammatory caſes, in exanthematous fevers, and as an attenuant and reſolvent in obſtructions of the viſcera. He gives it either in powder, mixed with abſorbents neutralized by lemon juice, or diſſolved in well dulcified ſpirits of vitriol or nitre, in which laſt form he finds it in ſome caſes to anſwer beſt: from fifteen to twenty-five drops of the ſaturated ſolution are given for a doſe in any agreeable warm liquor. He recommends it likewiſe externally againſt inflammations, eryſipelaſes, and gouty pains, diſſolved in ſpirit of wine, either by itſelf, or with the addition of camphor and opium. *M. S. of Dr. Lewis.*

(b) Homberg, *Memoires l'acad. roy. des ſcienc. de Paris, pour l'ann.* 1699.

Solutions of calcareous earths in this acid are in taſte bitteriſh and very pungent. They are difficultly made to aſſume a cryſtalline appearance; and when evaporated and exſiccated by heat, the dry ſalt deliquiates again in the air. This ſalt has not hitherto been employed medicinally, nor is it as yet much known. It is a common ingredient in waters, which when its quantity is conſiderable, it renders hard and indiſpoſed to putrefy, apparently impeding putrefaction in a much greater degree than an equal quantity of ſea ſalt. Alkaline ſalts, fixt or volatile, added to the ſolutions, precipitate the earthy baſis; and uniting with the acid in its ſtead, compoſe therewith, according to the ſpecies of alkali employed, the common, cubical, or ammoniacal nitre mentioned in the preceding paragraph.

Nitrum calcareum verum.

The nitrous ſpirit diſſolves zinc, iron, copper, biſmuth, lead, mercury, and ſilver, the moſt readily of all the acids: tin it diſſolves imperfectly: regulus of antimony it only corrodes: ſee the reſpective metals.

The concentrated acid, combined with a due proportion of rectified ſpirit of wine, loſes its acidity; the coalition of the two producing a new compound, of a gratefully pungent taſte and colour, and which is given from a few drops to a tea-ſpoonful or more as mildly aperient, diuretic, antiphlogiſtic, in ſome degree anodyne and antiſpaſmodic. On mixing the two ſpirits together, a great heat, ebullition, and noxious red vapours ariſe: this conflict is leſs violent when, cautiouſly and by little and little, the acid ſpirit is added to the vinous, than when the vinous is added to the acid. It is prudent alſo to place the bottle containing the ſpirit of wine, in a veſſel of cold water. One part of the ſtrong acid ſpirit is commonly taken to three of the ſpirit of wine‡, or half a pound to a quart†: the mixture, after ſtanding for ſome time that the two liquors may in ſome degree unite, is ſet to diſtil with a gentle fire, by which the union is completed, and the very volatile dulcified ſpirit ſeparated from the more fixt acid that remains undulcified. The diſtillation is directed to be continued ſo long as the ſpirit that comes over raiſes no efferveſcence with fixt alkaline ſalts†; it may be regulated more commodiouſly by performing the proceſs in a water bath‡, for all that riſes in this heat will be found to be a pure dulcified ſpirit.

Spiritus nitri dulcis
† *Ph. Lond.*
Acidum nitri vinoſum, vulgo ſpiritus nitri dulcis
‡ *Ph. Edinb.*

A ſubtile

Nitrous ether.

A ſubtile ethereal fluid, ſimilar in its general qualities to that deſcribed under the head of vitriolic acid, is obtainable with the nitrous in a more compendious manner. If equal parts by meaſure of ſpirit of nitre and ſpirit of wine, of moderate ſtrength, be mixed together, the bottle cloſely ſtopt, and ſet in a cool place, a large proportion of ether riſes to the ſurface in a few days: it may be purified from the adhering acid, by ſhaking it with water in which ſome fixt alkaline ſalt has been diſſolved, and then drawing off the ether by diſtillation. The medicinal qualities of this ſubtile fluid are not as yet much known.

NUMMULARIA.

NUMMULARIA Pharm. Pariſ. Nummularia major lutea C. B. Hirundinaria. Centimorbia. Lyſimachia Nummularia Linn. MONEYWORT: a low creeping plant, with ſquare ſtalks, and ſmooth little roundiſh or heart-ſhaped leaves ſet in pairs at the joints upon ſhort pedicles: in their boſoms appear yellow ſolitary monopetalous flowers, each divided into five oval ſegments, and followed by a ſmall round capſule full of minute ſeeds. It is perennial, grows wild in moiſt paſture grounds, and flowers from May to near the end of ſummer.

THIS herb is accounted reſtringent, antiſcorbutic, and vulnerary. Boerhaave looks upon it as ſimilar to a mixture of ſcurvygraſs with ſorrel: it appears indeed to have ſome degree both of pungency and acidity, but it is far weaker than thoſe herbs, or than any mixture of the two.

NUX MOSCHATA.

NUX MOSCHATA Pharm. Lond. & Edinb. Nux myriſtica fructu rotundo C. B. Nuciſta. Myriſtica officinalis Linn. NUTMEG: the aromatic kernel of a large nut, produced by a tree ſaid to reſemble the pear tree, growing in the Eaſt Indies. The outer part of the fruit is a ſoft fleſhy ſubſtance like that of the walnut, which ſpontaneouſly opens when ripe: under this lies a red membrane called mace, forming a kind of reticular covering, through the fiſſures of which is ſeen the hard woody ſhell that includes the nutmeg. Two ſorts of this kernel are diſtinguiſhed: one of an oblong figure, called male; the other roundiſh, or of the ſhape of an olive, called female: this laſt is the officinal ſpecies, being preferred to the other on account of its ſtronger and more agreeable flavour, and its being, as is ſaid, leſs ſubject to become carious. The nutmegs are cured, according to Rumphius, by dipping them in a ſomewhat thick mixture of lime and water, that they may be every where coated with the lime, which contributes to their preſervation.

The nutmeg is a moderately warm, grateful, unctuous ſpice; ſuppoſed to be particularly uſeful in weakneſs of appetite, and the nauſeæ and vomitings accompanying pregnancy, and in fluxes; but liable, when taken too freely, to ſit very uneaſy on the ſtomach, and, as is ſaid, to affect the head. Roaſted with a gentle heat, till it becomes eaſily friable, it proves leſs ſubject to theſe inconveniences, and is ſuppoſed likewiſe to be more uſeful in fluxes.

Nux moſch. torrefacta *Pharm. Lond.*

Nutmegs, diſtilled with water, yield nearly one ſixteenth *(a)* their weight of a limpid eſſential oil, very grateful, poſſeſſing the flavour of the ſpice in perfection, and which is ſaid to have ſome degree of an antiſpaſmodic or hypnotic *(b)* power: on the ſurface of the remaining decoction is found floating an unctuous concrete matter like tallow, of a white colour, nearly inſipid, not eaſily corruptible, and hence recommended as a baſis for odoriferous balſams *(c)*: the decoction, freed from this ſebaceous matter, and inſpiſſated, leaves a weakly bitter ſubaſtringent extract. Rectified ſpirit takes up, by maceration or digeſtion, the whole ſmell and taſte of the nutmegs, and receives from them a deep bright yellow colour: the ſpirit, drawn off by diſtillation from the filtered tincture, is very ſlightly impregnated with their flavour; greateſt part of the ſpecific ſmell, as well as the aromatic warmth, bitteriſhneſs and ſubaſtringency of the ſpice remaining concentrated in the extract. The eſſential oil, and an agreeable cordial water, lightly flavoured with the volatile parts of the nutmeg by drawing off a gallon or nine pounds of proof ſpirit from two ounces of the ſpice,

Ol. ſtill. ſeu eſſent. nucis moſchatæ *Pharm. Lond.*

Aqua nucis moſch. *Phar. Lon. & Edinb.*

(a) Hoffman, *Obſervationes phyſico-chymicæ, lib.* i. *obſ.* 1.

(b) *Miſcell. nat. curioſor. dec.* III. *ann.* ii. *obſ.* 120. Bontius, *de medicina Indorum, p.* 20.

* *(c)* After a fluid eſſential oil had been procured from nutmegs by diſtillation, on repeating the proceſs upon the reſiduum, an oil of a butyraceous conſiſtence aroſe, which poſſeſſed the taſte and odour of the nutmeg, and was perfectly ſoluble in alcohol. *Gaubii Adverſar.*

are kept in the ſhops. Both the oil, and the ſpirituous tincture and extracts, agree better with weak ſtomachs than the nutmegs in ſubſtance.

Nutmegs, heated, and ſtrongly preſſed, give out a fluid yellow oil, which concretes on growing cold into a ſebaceous conſiſtence. Rumphius informs us, that in the ſpice iſlands, when the nuts are broken, thoſe kernels which appear damaged, carious, or unripe, are ſeparated for this uſe, and that ſeventeen pounds and a quarter of ſuch kernels yield only one pound of oil, whereas, when the nutmeg is in perfection, it is ſaid to afford near one third its own weight.

Ol. nucis moſch. expreſſum, macis vulgo dictum *Phar. Lon.* & *Edinb.*

Two kinds of ſebaceous matter, ſaid to be expreſſed from the nutmeg, are diſtinguiſhed in the ſhops by the name of oil of mace: the beſt ſort, brought from the Eaſt Indies in ſtone jars, is ſomewhat ſoft, of a yellow colour, and of a ſtrong agreeable ſmell greatly reſembling that of the nutmeg itſelf: the other comes from Holland in ſolid maſſes, generally flat and of a ſquare figure, of a paler colour and much weaker ſmell. Theſe oils are employed chiefly externally in ſtomach plaſters, and in anodyne and nervine unguents and liniments. They appear to be a mixture of the groſs ſebaceous matter of the nutmeg with a little of the eſſential or aromatic oil; both which may be perfectly ſeparated from one another by maceration or digeſtion in rectified ſpirit, or by diſtillation with water. The ſpirituous tincture, the diſtilled water, and the eſſential oil, are nearly ſimilar to thoſe drawn from the nutmeg itſelf, the pure white ſebaceous ſubſtance being left behind.

NUX PISTACIA.

NUX PISTACIA Pharm. Edinb.(a) Pistachio nut: an oblong, pointed nut, about the ſize and ſhape of a filberd; including a kernel of a pale greeniſh colour, covered with a yellowiſh or reddiſh ſkin. It is the produce of a large tree, with winged leaves, reſembling thoſe of the aſh, *piſtacia peregrina fructu racemoſo ſive terebinthus indica theophraſti C. B. Piſtachia vera Linn.* which grows ſpontaneouſly in the eaſtern countries, and bears the cold of our own.

Pistachio nuts have a pleaſant ſweetiſh unctuous taſte, reſembling that of ſweet almonds: their principal difference from which conſiſts in their having rather a greater degree of ſweetneſs, accompanied with a light grateful flavour, and in being more oily, and hence ſomewhat more emollient, and perhaps more nutritious. They have been ranked among the principal analeptics, and greatly eſteemed by ſome in certain weakneſſes and emaciations. They are taken chiefly in ſubſtance, their greeniſh hue rendering them unſightly in the form of an emulſion. They are very liable to grow rancid in keeping.

(a) Expunged.

NUX VOMICA.

NUX VOMICA Pharm. Pariſ. Nux metella. Vomic nut: a flat roundiſh ſeed or kernel, about an inch broad and near a quarter of an inch thick, with a prominence in the middle on both ſides, of a grey colour, covered with a kind of woolly matter, internally hard and tough like horn. It is the produce of a large tree growing in the Eaſt Indies, called by Plukenet *cucurbitifera malabarienſis, œnopliæ foliis rotundis, fructu orbiculari rubro cujus grana ſunt nuces vomicæ officinarum*; by Linnæus, *Strychnos Nux Vomica.*

This ſeed diſcovers to the taſte a conſiderable bitterneſs, but makes little or no impreſſion on the organs of ſmell. It has been recommended in tertian and quartan fevers, in virulent gonorrhœas, and as an alexipharmac: Fallopius relates, that it was given with ſucceſs in the plague; that in doſes of from a ſcruple to half a dram, it procured a plentiful ſweat; and that where this evacuation happened, the patient recovered*(a)*. At preſent it is looked upon, and not without good foundation, as a deleterious drug; which, though like many other deleterious ſubſtances, capable, in certain doſes and in certain circumſtances, of producing happy effects, has its ſalutary and pernicious operations ſo nearly and ſo indeterminably allied, that common prudence forbids its being ventured on. Hoffman tells us of a girl of ten years of age, to whom fifteen grains, given at twice, for the cure of an obſtinate quartan, proved mortal*(b)*. The principal ſymptoms it has been obſerved to produce, in human ſubjects and brutes*(c)*, are, great anxieties, ſtrong convulſions or epileptic fits, paralytic tremors and reſolutions, a great increaſe of the motion of the heart and of reſpiration, and reachings and ſubverſions of the ſtomach. Diſſections of dogs killed by it have ſhewn no material injury of the groſſer parts; from whence we may preſume that it is the nervous ſyſtem which it immediately offends. It is probable, that the active matter of this ſeed is of the ſame nature with that of bitter almonds, but more developed and in a more concentrated ſtate.

(a) *Tract. de tumoribus præternaturalibus, cap.* 27.

(b) *Philoſophia corp. human. morboſi, P.* ii. *cap.* viii. §. 8.

(c) *Vide Wepfer, De cicuta aquatica, cap.* xiii. *p.* 194, *&c ſeq.*

* The nux vomica was lately uſed in Sweden in an epidemic dyſentery, as it is ſaid, with remarkably good effects. A ſcruple of the powder was given to adults once a day in barley water, proper evacuants having been premiſed. Bergius*(a)*, however, aſſerts, that though the flux was ſuppreſſed for twelve hours by this medicine, it never failed to return. He alſo mentions a caſe in which the above doſe cauſed convulſive ſtretchings and vertigo; and after the cure of the dyſentery by other medicines, a pain in the ſtomach and epigaſtric region remained for a long time. In the iſle of Ceylon the nux vomica is ſaid to be uſed internally as a ſpecific againſt the bite of a ſpecies of waterſnake.

The wood or roots of the tree, or of other trees of the ſame genus, are ſometimes brought from the Eaſt Indies under the name of *lignum colubrinum (Pharm. Pariſ.)* or ſnakewood, in pieces about the thickneſs of a man's arm, covered with a browniſh or ruſty coloured bark, internally of a yellowiſh colour with whitiſh ſtreaks.

This wood, in raſping or ſcraping, emits a faint not diſagreeable ſmell; and when chewed for ſome time diſcovers a very bitter taſte. Cartheuſer relates, that it gives a gold-coloured tincture both to water and ſpirit, and that the inſpiſſated extracts are browniſh; that the watery infuſion has an agreeable ſmell like that of rhodium, the ſpirituous little or none; that the infuſions and extracts made with both menſtrua are very bitter; that the quantity of watery extract amounts to one ſixth of the wood, and that of the ſpirituous to near one fourth; and that the wood remaining after the action of ſpirit, yields ſtill, to water, a gold-coloured tincture, and one eighth its weight of a bitter ſubacrid extract: from whence water appears to be the proper menſtruum of its active matter.

(a) *Mat. Med.* 145.

The lignum colubrinum has been recommended, in ſmall doſes, not exceeding half a dram, as an anthelmintic, and in obſtinate quartans, jaundices, cachexies, and other chronical diſorders: it is ſaid to operate moſt commonly by ſweat, ſometimes by ſtool, and ſometimes by vomit. It appears however to be poſſeſſed of the ſame ill qualities with the nux vomica itſelf, though in a lower degree, having in ſundry inſtances been productive of convulſions, tremors, ſtupors, and diſorders of the ſenſes.

THE *faba indica Pharm. Pariſ. Faba ſancti ignatii,* or *faba febrifuga,* is the produce of a tree of the ſame kind, growing in the Eaſt Indies and in the Philippine iſlands, called by Plukenet *cucurbitifera malabathri foliis ſcandens, catalongay & contara philippinis orientalibus dicta, cujus nuclei pepitas de beſayas aut catbalogan & fabæ ſancti ignatii ab hiſpanis, igaſúr & mananaog inſulanis nuncupati*; by Linnæus, *Strychnos Ignatii.* The ſeeds of the gourd-like fruit, improperly called beans, are of a roundiſh figure, very irregular and uneven, about the ſize of a middling nutmeg, ſemitranſparent, and of a hard horny texture.

Theſe ſeeds have a very bitter taſte, and no conſiderable ſmell: when freſh they are ſaid to have ſomewhat of a muſky ſcent. Neumann obſerves, that an extract made of them by rectified ſpirit impreſſes at firſt a very agreeable bitterneſs, ſomewhat like that of peach kernels, which going off leaves in the mouth a ſtrong bitter; that an extract made with water is likewiſe bitter; that the watery extract is greeniſh and in quantity one half of the ſeeds, the ſpirituous yellowiſh and little more than one fifth; that the ſeeds remaining after the action of water ſcarcely gave out any thing to ſpirit, but that after ſpirit they yielded above one fourth of extract with water.

St. Ignatius's bean is ſaid by father Camelli to be employed by the common people in the Philippine iſlands againſt all diſeaſes. The effects attributed to it are ſimilar to thoſe of the two foregoing ſubſtances: he obſerves, that it generally vomits, ſometimes purges, and almoſt always produces in the Europeans, though not in the Indians, ſpaſmodic motions; that the doſe in ſubſtance, as an emetic, is ten or twelve grains, to be taken an hour after eating; and that in ſmaller doſes it ſometimes promotes a plentiful ſweat*(a)*. Neumann ſays he has known intermitting fevers cured by drinking, on the approach of a paroxyſm, an infuſion of ſome grains of the ſeed made in carduus water*(b)*; and I have been informed, that two grains were found to have as much effect as a full doſe of bark. This ſeed, nevertheleſs, as it apparently partakes of the qualities of the two preceding articles, ſeems much too hazardous for general uſe.

NYMPHÆA.

WATER-LILY: an aquatic plant, with thick firm roundiſh leaves, furniſhed with two obtuſe ears at the pedicle, floating on the ſurface of the water: the flowers, which ſtand on ſeparate pedicles, are large, compoſed of ſeveral petala with numerous ſtamina in the middle, followed by ſingle capſules full of blackiſh ſhining ſeeds: the root is long, thick, internally white and fungous.

1. NYMPHÆA ALBA *ſive Nenuphar Pharm. Edinb.(c) Nymphæa alba major C. B. Leuconymphæa. Nymphæa alba Linn.* White water-lily: with white flowers ſet in four-leaved cups: the ſeed veſſels round, and the roots externally browniſh or blackiſh.

2. NYMPHÆA LUTEA: *Nymphæa major lutea C. B. Nymphæa lutea Linn.* Yellow water-lily: with yellow flowers ſet in large five-leaved cups, the ſeed veſſels ſhaped like a pear, and the roots externally greeniſh.

BOTH theſe plants are found in rivers and large lakes; the yellow is moſt common: they are perennial, and flower uſually in June. The roots and flowers have been employed, both internally and externally, as demulcent, anti-inflammatory, and in ſome degree anodyne. Their virtues, however, do not appear to be very great, as they have no ſmell, at leaſt when dried, and but little taſte: extracts made from them both by water and ſpirit are weakly bitteriſh, ſubaſtringent, and ſubſaline. Lindeſtolpe informs us, that in ſome parts of Sweden, the roots, which are the ſtrongeſt part, were in times of ſcarcity uſed as food, and did not prove unwholeſome.

(a) *Philoſophical tranſactions, numb.* 250.

(b) *Chymia medica,* &c. i. 717. *Chemical works, p.* 347.

(c) Expunged.

OCHRA.

OCHRA ſive Minera ferri lutea vel rubra Pharm. Pariſ. OCHRE: an argillaceous earth; leſs tenacious, when moiſtened, than the clays and the boles; impregnated with a calx of iron, and thereby tinged of a yellow or red colour. The dark red ſort is called reddle or ruddle, *rubrica fabrilis Pharm. Edinb.* (a) the yellow *ſil*; *ochra plinio & latinis ſil dicta Charleton.* Thoſe which are naturally yellow become red by burning. Both kinds are dug in ſeveral parts of England.

THESE earths diſcover their argillaceous nature, by burning hard in the fire; and their ferrugineous impregnation, by digeſtion in aqua regis, which extracts the iron, leaving the earth nearly white. To the taſte they ſeem ſomewhat aſtringent, in conſequence, not of the metallic, but of the earthy part, for the iron is in ſuch a ſtate as not to be acted on by any fluid that exiſts in the bodies of animals: it may therefore be preſumed, that they do not differ materially, in virtue, from the boles; except in being leſs viſcid, and therefore of leſs efficacy for obtunding acrid humours: ſee *Bolus* and *Cimolia.* Among us they are rarely or never uſed medicinally under their own name; though ſometimes applied in the ſhops to the counterfeiting of earths that are leſs common.

OCIMUM.

OCIMUM, Baſilicum, Herba regia. BASIL: a plant, with ſquare ſtalks; oval leaves ſet in pairs; and long ſpikes of labiated flowers, whoſe upper lip is divided into four parts, the lower entire: the cup alſo has two lips, one cut into four ſections, the other into two.

1. OCIMUM *Pharm. Edinb.* (a) *Ocimum vulgatius C. B. Ocymum medium citratum Ger. Ocimum Baſilicum Linn.* Common or citron baſil: with moſt of the leaves indented, and the flower-cups edged with fine hairs.

(a) Expunged.

2. Ocimum caryophyllatum: *Ocimum minimum C. B. & Linn.* Small or buſh baſil: with uncut leaves.

Both theſe plants are natives of the eaſtern countries, and ſown annually in our gardens for culinary as well as medicinal uſes. The ſeeds, which rarely come to perfection in this climate, eſpecially thoſe of the ſecond ſort, are brought from Italy and the ſouth of France.

The leaves of baſil are accounted mildly balſamic: infuſions of them are ſometimes drank as tea in catarrhous and uterine diſorders, and the dry leaves in ſubſtance made an ingredient in cephalic and ſternutatory powders. They are very juicy, of a weakly aromatic and very mucilaginous taſte, and of a ſtrong ſmell, which is ſomewhat diſagreeable when the herbs are freſh, but is improved by drying: thoſe of the firſt ſort approach to the lemon ſcent, thoſe of the ſecond to that of cloves. Diſtilled with water, they yield a conſiderable quantity of eſſential oil, of a penetrating fragrance, commended by Hoffman as a nervine, ſimilar, but greatly ſuperiour, to oil of marjoram *(a)*.

* *OENANTHE.*

OENANTHE: this is the botanical name of a genus of plants of the umbelliferous claſs, of which there are three ſpecies natives of Great Britain. One of theſe only is known by its effects on the human body, the

Oenanthe crocata *Linn.* Hemlock dropwort: this is a large umbelliferous plant, growing in ditches and other moiſt places; with pinnated leaves, reſembling thoſe of celery or chervil, and ribbed ſtalks. Its roots afford the eaſieſt mark of diſtinction, which are white, thick, and ſhort, and grow ſeveral together, forming a kind of bunch.

The hemlock dropwort has long been known as a moſt dangerous poiſon; the moſt virulent, perhaps, that this country produces. Its roots or leaves eaten by miſtake, have frequently proved fatal, occaſioning violent ſickneſs and vomiting, rigors, convulſions, delirium, and other terrible affections of the nervous ſyſtem. The head has been ſaid to be

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(a) Obſervationes phyſico-chymicæ, lib. i. *obſ.* 4.

affected even by being in the ſame room with a quantity of the plant. Like ſo many other deleterious vegetables, it, however, is capable of being rendered a powerful remedy. A caſe is publiſhed by Dr. Pulteney in the *Philoſ. Tranſact.* Vol. LXII. in which this plant, uſed by miſtake inſtead of the water parſnep, proved remarkably efficacious in removing an inveterate ſcorbutic complaint, which had reſiſted a variety of other remedies. The doſe firſt given was a common ſpoonful of the juice of the root, which at the firſt exhibition produced very alarming effects. This was afterwards reduced to three tea-ſpoonfuls; which quantity was perſiſted in a conſiderable time, and then changed for a tea of the leaves. The medicine never proved purgative, but was diuretic. It always occaſioned a degree of vertigo; accompanied, when the juice itſelf was taken, with nauſea and ſickneſs.

If this experiment be imitated, it is obvious that the greateſt degree of caution will be neceſſary.

OLEA.

OLEA ſativa C. B. Olea europæa Linn. OLIVE: an evergreen tree, with oblong, narrow, willow-like leaves, and monopetalous whitiſh flowers, cut into four ſections, followed by cluſters of oval black fruit, containing, under a fleſhy pulp, a hard rough ſtone. It is a native of the ſouthern parts of Europe, and bears the ordinary winters of our own climate.

THE fruit of this tree *(oliva)* has a bitter, auſtere, very diſagreeable taſte: pickled, as brought from abroad, it proves leſs ungrateful, and is ſuppoſed to promote appetite and digeſtion, and attenuate viſcid phlegm in the firſt paſſages: the Lucca olives, which are ſmaller than the others, have the weakeſt taſte; and the Spaniſh, or larger, the ſtrongeſt: thoſe brought from Provence, which are of a middling ſize, are in general moſt eſteemed. But the principal conſumption of olives is in the preparation of the common ſallad oil *(oleum olivarum Pharm. Lond. & Edinb.)* which is obtained by grinding and preſſing them when thoroughly ripe: the finer and purer oil iſſues firſt by gentle preſſure; and inferiour ſorts, on heating the reſiduum and preſſing it more ſtrongly. All theſe oils contain a portion of watery moiſture; and of the mucilaginous ſubſtance of the fruit: to ſeparate theſe, and thus prevent the oil from growing rancid, ſome ſea ſalt is added, which not being diſſoluble in the pure oil, imbibes the watery and mucilaginous parts, and ſinks with them to the bottom. As this oil grows thick in a moderate degree of cold, a part of the ſalt, thrown up by ſhaking the veſſel, is ſometimes detained in it, ſo as to render the taſte ſenſibly ſaline. In virtue, it does not differ materially from the other flavourleſs expreſſed oils: it is preferred to the others for dietetic uſes, and in plaſters and unguents, but is more rarely employed as an internal medicine.

OLIBANUM.

OLIBANUM Pharm. Lond. & Edinb. OLIBANUM: a gummy-reſin brought from Turkey and the Eaſt Indies, uſually in drops or tears like thoſe of maſtich, but larger, of a pale yellowiſh colour, which by age becomes reddiſh. It is the product of a tree of the juniper kind growing in Arabia; the *juniperus lycia* of Linnæus.

THIS gummy-reſin has a moderately ſtrong, not very agreeable ſmell, and a bitteriſh ſomewhat pungent taſte: in chewing, it ſticks to the teeth, becomes white, and renders the ſaliva milky. Laid on a red-hot iron, it readily catches flame, and burns with a ſtrong, diffuſive, not unpleaſant ſmell: it is ſuppoſed to have been the incenſe uſed by the ancients in their religious ceremonies, though it is not the ſubſtance now known by that name in the ſhops. On trituration with water, greateſt part of it diſſolves into a milky liquor, which on ſtanding depoſites a portion of reſinous matter, and being now gently inſpiſſated, leaves a yellow extract, which retains greateſt part of the ſmell as well as the taſte of the olibanum; its odorous matter appearing to be of a leſs volatile kind than that of moſt other gummy-reſins. Rectified ſpirit diſſolves leſs than water, but takes up nearly all the active matter: the tranſparent yellowiſh ſolution, inſpiſſated, yields a very tenacious reſin, in which the active parts of the juice are ſo enveloped and locked up, that they are ſcarcely to be diſcovered, either by the ſmell or taſte.

Olibanum is recommended in diſorders of the head and breaſt, in hæmoptoës, and in alvine and uterine fluxes: the doſe is from a ſcruple to a dram or more.

ONONIS.

ONONIS & Anonis ſeu Areſta bovis Pharm. Edinb.(a) *Anonis ſpinoſa flore purpureo C. B. Reſta bovis. Remora aratri. Ononis ſpinoſa Linn.* REST-HARROW: a plant with flexible branches terminating in ſharp prickles; ſmall oval indented leaves, ſtanding generally three together, without pedicles; and purpliſh papilionaceous flowers, ſet in pairs, followed each by a ſhort pod containing three unequal kidney-ſhaped ſeeds. It is perennial, grows wild in waſte grounds and dry fields, and with its long tough ſpreading roots obſtructs the plough or harrow.

THE roots of reſt-harrow have a faint unpleaſant ſmell, and a ſweetiſh, bitteriſh, ſomewhat nauſeous taſte. Their active matter is confined to the cortical part; which has been ſometimes given in powder, in doſes of a dram, and made an ingredient in apozems or decoctions, as an aperient and diuretic. Its virtue is extracted both by water and ſpirit.

OPIUM.

OPIUM Pharm. Lond. & Edinb. OPIUM: a concrete gummy-reſinous juice; ſomewhat ſoft and tenacious, eſpecially when much handled or warmed; of a dark reddiſh brown colour in the maſs, and when reduced into powder yellow. It is brought from Egypt, Perſia, and ſome other parts of Aſia, in flat cakes or irregular maſſes, from four to about ſixteen ounces in weight, covered with leaves to prevent their ſticking together.

It is extracted from the heads of white poppies (ſee *Papaver*) which in thoſe countries are cultivated in fields for this uſe. Kæmpfer reports, that the heads, when almoſt ripe, are wounded with a five-edged inſtrument, by which as many parallel inciſions are made at once from top to bottom; that the juice which exudes is next day ſcraped off, and the other ſides of the heads wounded in like manner; and that the juice is afterwards worked with a little water, till it acquires the conſiſtence, tenacity, and brightneſs of the fineſt pitch. The beſt opium was formerly called Thebaic opium, from its being prepared about Thebes in Egypt: no diſtinction is now made in regard to the places of its production, though the epithet *thebaic* ſerves to diſtinguiſh ſome of its officinal preparations.

(a) Expunged.

Opium has a faint diſagreeable ſmell, and a bitteriſh, ſomewhat hot, biting taſte. Watery tinctures of it ſtrike a black colour with chalybeate ſolutions, and thus ſeem to diſcover ſome aſtringency. Mixed with the ſerum of blood, they thicken and render it whitiſh; and on blood itſelf, newly drawn, they have nearly a like effect: Mr. Eller obſerves, that on examining with a microſcope blood thickened by a vinous tincture of opium, the nature of its globules ſeemed to be deſtroyed. But neither from theſe, nor any of the other known ſenſible properties of this drug, can its ſurprizing operation in the human body be deduced.

Taken in proper doſes, it commonly procures ſleep, and a temporary reſpite from pain, or the action of any ſtimulating power. The cauſe of the pain it in many caſes confirms or augments; and in not a few, it fails even of giving palliating relief. The caſes in which it is proper or improper will be beſt underſtood from a view of its general effects; which, ſo far as experience has hitherto diſcovered them, are the following.

It renders the ſolids, while the operation of the opium continues, leſs ſenſible of every kind of irritation, whether proceeding from an internal cauſe, or from acrimonious medicines, as cantharides, and the more active mercurials, of which it is the beſt corrector—It relaxes the nerves; abating or removing cramps or ſpaſms, even thoſe of the more violent kind; and increaſing paralytic diſorders and debilities of the nervous ſyſtem—It incraſſates thin ſerous humours in the fauces and adjacent parts; by which means, it proves frequently a ſpeedy cure for ſimple catarrhs and tickling coughs; but in phthiſical and peripneumonic caſes, dangerouſly obſtructs expectoration, unleſs this effect be provided againſt by ſuitable additions, as ammoniacum and ſquills—It produces a fullneſs and diſtenſion of the whole habit; and thus exaſperates inflammations both internal and external, and all plethoric ſymptoms—It promotes perſpiration and ſweat; but reſtrains all other evacuations, unleſs when they proceed from a relaxation and inſenſibility of the parts, as the colliquative diarrhœæ in the advanced ſtage of hectic fevers—

fevers—It promotes labour-pains and delivery*(a)* more effectually than the medicines of the ſtimulating kind uſually recommended for that purpoſe; partly perhaps by increaſing plenitude, and partly by relaxing the ſolids or taking off ſpaſmodic ſtrictures—And indeed all the preceding effects are perhaps conſequences of one general power, being nearly allied to thoſe which natural ſleep produces*(b)*.

The operation of opium is generally accompanied with a ſlow but ſtrong and full pulſe, and a ſlight redneſs, heat and itching of the ſkin: it is followed by a weak and languid pulſe, lowneſs of the ſpirits, ſome difficulty of breathing or a ſenſe of tightneſs about the breaſt, a ſlight giddineſs of the head, dryneſs of the mouth and fauces; and ſome degree of nauſea. Given on a full ſtomach, it commonly occaſions a nauſea from the beginning, which continues till the opium is rejected along with the contents of the ſtomach. Where the evacuation of acrid humours, accumulated in the firſt paſſages, is ſuppreſſed by it, great ſickneſs and uneaſineſs are generally complained of, till the ſalutary diſcharge either takes place again ſpontaneouſly or is promoted by art.

An over doſe occaſions either immoderate mirth or ſtupidity, a redneſs of the face, ſwelling of the lips, relaxation of the joints, vertigo, deep ſleep with turbulent dreams and ſtartings, convulſions, and cold ſweats. Geoffroy obſerves, that thoſe who recover, are generally relieved by a diarrhœa, or by a profuſe ſweat, which is accompanied with a violent itching. The proper remedies, beſides emetics, bliſters, and bleeding, are acids and neutral mixtures: Dr. Mead ſays he has given, with extraordinary ſucceſs, repeated doſes of a mixture of ſalt of wormwood with lemon juice.

A long continued uſe of opium is productive of great relaxation and debility, ſluggiſhneſs, heavineſs, loſs of appetite, dropſies, tremors, acrimony of the humours, frequent ſtimulus to urine, and propenſity to venery. On leaving it off, after habitual uſe, an extreme lowneſs of the ſpirits, languor, and anxiety, ſucceed; which are relieved by having again recourſe to opium, and in ſome meaſure by ſpirituous or vinous liquors.

With regard to the doſe, one grain is generally a ſufficient, and ſometimes too large a one: maniacal perſons, and thoſe who labour under

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(a) Mead, *Monita & præcept. med. p.* 253.

(b) See Young's *treatiſe on opium.*

violent ſpaſms, require oftentimes two, three, or more grains; though even in theſe caſes, it is generally more adviſable to repeat the doſe at proper intervals, than to enlarge it. By frequent uſe, much greater quantities may be borne: the Turks, who habituate themſelves to opium as a ſuccedaneum to ſpirituous liquors, are ſaid to take commonly a dram at a time, and Garcias ſays that he knew one who every day took ten drams.

Opium colat. vel Extract. thebaic. *Ph. Lon.*

Opium appears to conſiſt of about five parts in twelve of gummy matter, four of reſinous matter, and three of earthy or other indiſſoluble impurities *(a)*. From theſe laſt it is purified, in the ſhops, by ſoftening the opium with boiling water, in the proportion of a pint to a pound, into the conſiſtence of a pulp, with care to prevent its burning; and whilſt it remains quite hot, ſtrongly preſſing it from the feces through a linen cloth: the ſtrained opium is then inſpiſſated in a water-bath, or other gentle heat, to its original conſiſtence. When thus ſoftened with a ſmall quantity of water, the gummy and reſinous parts paſs the ſtrainer together; whereas, if diſſolved by a larger quantity, they would ſeparate from one another.

It has been diſputed, whether it is in the gummy or in the reſinous parts of opium, that its activity reſides. From the experiments of Hoffman *(b)* and Neumann *(c)*, it ſeems to be neither in the direct gum, nor in the direct reſin, but in a certain ſubtile part of the reſinous matter, ſomewhat analogous to eſſential oils, but of a much leſs volatile kind: they report, that on boiling the opium in water, there ariſes to the ſurface a frothy, viſcid, unctuous, ſtrong-ſcented ſubſtance, to the quantity of two or three drams from ſixteen ounces: that this ſubſtance, in the doſe of a few grains, has killed dogs that could bear above a dram of crude opium; that in diſtillation with water, though it does not riſe itſelf, it gives over, at leaſt in part, the active principle of which it is the matrix; impregnating the diſtilled liquor with its ſcent and its ſoporific power; as eſſential oils exhale their odoriferous principle in the air, without being diſſipated themſelves. What this ſubtile and highly active principle really is, in eſſential oils, in odorous vegetables that yield no oil, and in opium, is equally unknown.

(a) Alſton, *Edinburgh medical eſſays, vol.* v. *art.* 12.

(b) *Diſs. de opii correctione genuina & uſu, Oper. ſupplement.* II. *P.* i. *p.* 645. *Not. ad Poterium, p.* 437.

(c) *Chymia medica, vol.* i. *p.* 996. *Chemical works, p.* 308.

Both water and rectified ſpirit extract, difficultly, by maceration or digeſtion, the active matter of opium, and receive from it a yellow or browniſh tincture. The watery ſolution is found to contain great part of the reſin along with the gum; and the ſpirituous, a ſmaller proportion of the gum along with the reſin. Such part of the gum as is left by ſpirit, and ſuch part of the reſin as is left by water, ſeem to be equally inert.

Tinctures of opium in water, wine, and proof ſpirit, have the ſame effects as the opium in ſubſtance; with this difference, that they exert themſelves ſooner in the body, and are leſs diſpoſed to leave a nauſea on the ſtomach. Tinctures made in rectified ſpirit are ſaid to act with greater power than the others: Geoffroy relates, from his own obſervation, that while the watery and vinous tinctures occaſioned quiet ſleep, the ſpirituous brought on a phrenzy for a time. It is ſaid likewiſe, that alkaline ſalts diminiſh the ſoporific virtue of the opium; that fixt alkalies render it diuretic, whilſt volatile ones determine its action to the cutaneous pores; and that acids almoſt entirely deſtroy its force.

Tinctur. thebaic. *Ph. L.*

Tinctura thebaica vulgo laudanum liquidum *Ph. Ed.*

The officinal tinctures of opium are made in wine or proof ſpirit. The college of London directs two ounces of ſtrained opium to be macerated without heat for a week in a pint of mountain, with the addition of a dram of cinnamon and as much cloves to alleviate the ill ſmell of the opium: the college of Edinburgh orders the ſame quantity of crude opium to be digeſted for four days in a pound and a half of ſpirituous cinnamon water: a mixture of wine and proof ſpirit has been ſometimes made choice of, in order to prevent in ſome meaſure an inconvenience which both of them ſeparately, conſidered as officinals, are liable to, being apt to throw off in long ſtanding a part of the opium, which in wine falls to the bottom, and forms a cruſt on the ſurface of ſpirit. Of the firſt of the above tinctures twenty drops, and of the latter twenty-five drops, are reckoned to contain one grain of opium: but as theſe quantities of the menſtrua do not eaſily diſſolve all the active matter of ſo large a proportion of the opium, thoſe doſes are generally obſerved to have ſomewhat leſs effect than a grain of the drug in ſubſtance. As drops alſo, according to different circumſtances, vary in quantity, though in number the ſame, it were to be wiſhed that the ſhops were furniſhed with a ſolution of this drug, made in a quantity of menſtruum large enough not only for the complete extraction of the active parts, but to admit of the doſe being exactly determined by weight or meaſure.

In a ſolid form, independently of ſuch materials as may be ſubſervient to the other indications of cure, it is ſometimes mixed with ſaponaceous or gummy ſubſtances which promote its diſſolution in the ſtomach, and ſometimes with reſinous ones which render its diſſolution and operation more gradual and ſlow: to theſe is commonly ſuperadded ſome aromatic ingredient, to prevent its occaſioning a nauſea. Thirty-two parts of almond ſoap, four of ſtrained opium moiſtened with a little wine, and one of eſſence of lemons, beaten together; or one part of opium, four of extract of liquorice, three of Spaniſh ſoap, and two of powdered Jamaica pepper, make an elegant pill of the firſt kind; and ſixteen parts of ſtrained ſtorax, eight of ſaffron, and five of ſtrained opium, of the latter.

Pil. ſaponaceæ *Ph. Lon.*

Pil. thebaicæ *vulgo* pacificæ *Ph. E.*

Pil. e ſtyrace *Pharm. Lond.*

Many have endeavoured to correct certain ill qualities, which they ſuppoſe opium to be poſſeſſed of, by roaſting it, by fermentation, by long continued digeſtions or boiling, by repeated diſſolutions and diſtillations. Theſe kinds of proceſſes, though recommended by ſeveral late writers, do not promiſe any ſingular advantage. That they weaken the opium is indeed very probable; but this intention is anſwered as effectually, and with far greater certainty, by diminiſhing the doſe of the opium itſelf: for the ill effects, which opium produces in certain circumſtances, do not depend on any diſtinct property or principle, and appear to be no other than the neceſſary conſequences of the ſame power, by which in other circumſtances it proves ſo beneficial: the only rational way of improving or correcting this valuable drug ſeems to be, by joining or interpoſing ſuch medicines, as may counteract or remove thoſe particular effects of it, which in particular caſes may be injurious.

OPOBALSAMUM.

OPOBALSAMUM Pharm. Lond. OPOBALSAMUM or BALSAM OF GILEAD: a reſinous juice, obtained from an evergreen tree or ſhrub (*balſamum ſyriacum rutæ folio C. B.*) ſaid to grow in Arabia. The beſt ſort, which naturally exudes from the plant, is ſcarce known in Europe;

and the inferiour kinds, ſaid to be extracted by lightly boiling the branches and leaves in water, are very rarely ſeen among us.

The true opobalſam, according to Proſper Alpinus, is at firſt turbid and white, of a very ſtrong pungent ſmell, like that of turpentine; but much ſweeter and more fragrant, and of a bitter, acrid, aſtringent taſte: on being kept for ſome time, it becomes thin, limpid, light, of a greeniſh hue, and then of a gold yellow, after which it grows thick like turpentine, and loſes much of its fragrance *(a)*. Some reſemble the ſmell of this balſam to that of citrons, others to that of a mixture of roſemary and ſage flowers. I have ſometimes met with a curious balſam of this laſt kind of ſmell, exceedingly fragrant, limpid, and thin: dropt on water, it ſpread itſelf all over the ſurface, imparting to the liquor a conſiderable ſhare of its taſte and ſmell: the groſſer part, that remained on the top of the water, was ſo tenacious, as to be eaſily taken up at once with the point of a needle, which is reckoned, by Alpinus and others, as a characteriſtic of the true balſam.

This precious balſam is of great eſteem in the eaſtern countries, both as a medicine, and as an odoriferous unguent and coſmetic. Its great ſcarcity has prevented its coming into uſe among us: nor are its virtues, probably, ſuperiour to thoſe of ſome of the reſinous juices more common in the ſhops; all theſe ſubſtances being in their general qualities alike, though differing in the degree of their gratefulneſs, pungency, and warmth.

OPOPANAX.

OPOPANAX Pharm. Lond. OPOPANAX: a concrete gummy-reſinous juice, obtained from the roots of an umbelliferous plant, which grows ſpontaneouſly in the warmer countries, and bears the colds of our own *(Paſtinaca Opopanax Linn.)* The juice is brought from Turkey and the Eaſt Indies, ſometimes in little round drops or tears, more commonly in irregular lumps, of a reddiſh yellow colour on the outſide with ſpecks of white, internally of a paler colour and frequently variegated with large white pieces.

(a) Vide Alpini *dialogum de balſamo.*

This gummy-reſin has a ſtrong diſagreeable ſmell, and a bitter, acrid, ſomewhat nauſeous taſte. It readily mingles with water, by triture, into a milky liquor, which on ſtanding depoſites a portion of reſinous matter and becomes yellowiſh: to rectified ſpirit it yields a gold-coloured tincture, which taſtes and ſmells ſtrongly of the opopanax. Water diſtilled from it is impregnated with its ſmell, but no eſſential oil is obtained on committing moderate quantities to the operation.

Opopanax is an uſeful attenuant and deobſtruent, and in conſiderable doſes looſens the belly. It is given from a ſcruple to a dram, in the ſame intentions as ammoniacum or galbanum; and joined in ſmaller doſes as an auxiliary to thoſe and the other deobſtruent gums.

ORIGANUM.

ORIGANUM Pharm. Lond. Origanum ſilveſtre, cunila bubula plinii C. B. Agrioriganum ſive onitis major Lob. Origanum anglicum Ger. Origanum vulgare Linn. ORIGANUM or WILD MARJORAM: a plant with firm round ſtalks, and oval, acuminated, uncut, ſomewhat hairy leaves, ſet in pairs upon ſhort pedicles: on the tops grow ſcaly heads of pale red labiated flowers, whoſe upper lip is entire and the lower cut into three ſegments, ſet in form of a convex umbel, intermixed with roundiſh purpliſh leaves: each flower is followed by four minute ſeeds incloſed in the cup. It is perennial, grows wild on dry chalky hills and gravelly grounds, in ſeveral parts of England, and flowers in June. The flowers, or rather flowery tops, of a ſomewhat different ſpecies, *origanum creticum*, were formerly brought from Candy, but have long given place to thoſe of our own growth, which are nearly of the ſame quality.

The leaves and flowery tops of origanum have an agreeable aromatic ſmell, and a pungent taſte, warmer than that of the garden marjoram, and much reſembling thyme; with which they appear to agree in medicinal virtue. Infuſions of them are ſometimes drank as tea, in weakneſs of the ſtomach, diſorders of the breaſt, for promoting perſpiration and the fluid ſecretions in general: they are ſometimes uſed alſo in nervine and antirheumatic baths; and the powder of the dried herb as an errhine. Diſtilled with water, they yield a moderate quantity of a very acrid penetrating eſſential oil, ſmelling ſtrongly of the origanum, but leſs agreeable than the herb itſelf: this oil is applied on a little cotton for eaſing the pains of carious teeth; and ſometimes diluted and rubbed on the noſtrils, or ſnuffed up the noſe, for attenuating and evacuating mucous humours.

Ol. eſſent. origani *P. L.*

OSTEOCOLLA.

OSTEOCOLLA Pharm. Edinb. (a) *Oſteocolla, aliis oſſifragus, oſteites, ammoſteus, oſteolithos, holoſteus, ſtelochites, Worm. muſ.* OSTEOCOLLA or BONE-BINDER: a foſſil ſubſtance, found in ſome parts of Germany, particularly in the marchè of Brandenburgh, and in other countries. It is met with in looſe ſandy grounds, ſpreading, from near the ſurface to a conſiderable depth, into a number of ramifications like the roots of a tree: it is of a whitiſh colour, ſoft while under the earth, friable when dry, rough on the ſurface, for the moſt part either hollow within, or filled with ſolid wood, or with a powdery woody matter (b).

THIS earth has been celebrated for promoting the coalition of fractured bones and the formation of a callus; a virtue to which it does not ſeem to have any claim. It is found to be compoſed of two different earthy ſubſtances, which are nearly in equal proportions, and which may be ſeparated from one another, by waſhing the powdered oſteocolla with water: the finer matter, which waſhes over, appears from its burning into quicklime, and its properties in other experiments, to be mere calcareous earth, not different in quality from chalk: the groſſer matter that remains is no other than ſand.

OSTREUM.

OSTREUM Pharm. Lond. The OYSTER; a common, bivalvous, marine ſhell-fiſh.

(a) Expunged.

(b) A more particular account of this foſſil may be ſeen in *Neumann's chemical works, p.* 11. and the *Memoires de l'academie royale des ſciences de Berlin, pour l'ann.* 1748.

Teſtæ oſtreorum prepar. *Pharm. Lond.* The ſhell of the oyſter, levigated into a ſubtile powder, is employed as an abſorbent, in heart-burns and other like complaints ariſing from acidities in the firſt paſſages: the hollow ſhells are generally made choice of, as containing more, than the thinner flat ones, of the fine white earth, in proportion to the outer rough coat, which laſt is found to be conſiderably impregnated with ſea ſalt. By calcination, they are converted into a ſtrong quicklime, which imparts to water a greater degree of lithontriptic power than the mineral limes; ſee *Calx viva.*

OVUM.

OVUM gallinaceum Pharm. Lond. HENS EGG.

EGGS are accounted very nutritious, but difficult of digeſtion, eſpecially if boiled hard. In medicine, the yolk has been employed as an intermedium for rendering reſinous juices and balſams ſoluble in water: it anſwers this purpoſe leſs effectually, and leſs elegantly than vegetable gums, the ſolutions obtained by means of the animal matter being apt on ſtanding to become putrid or rancid. The yolk, exſiccated by a gentle warmth, forms a friable concrete; the white, a firm ſemi-tranſparent one, in appearance reſembling amber or gum-arabic, and ſoluble again in watery liquors. The boiled white, placed in a moiſt cellar, deliquiates ſpontaneouſly, and gummy-reſinous ſubſtances, included in it, diſſolve along with it: preparations of this kind have been directed for medicinal uſes, but it does not appear that more of the gummy-reſin is thus diſſolved by the liquamen of the egg than by ſimple water.

Teſtæ ovorum præpar. *Pharm. Lond.* The ſhells of eggs, freed, after boiling, from the inner ſkin, and levigated into fine powder, are ſometimes uſed as abſorbents, and ſuppoſed, when combined with the acid humours in the firſt paſſages, to be leſs diſpoſed to bind the belly than moſt of the other teſtaceous powders.

PÆONIA.

PÆONIA Pharm. Lond. Pæonia folio nigricante ſplendido quæ mas, & pæonia femina flore pleno rubro majore C.B. Pæonia officinalis Linn.

Male and Female peony or piony: a plant with large leaves, divided deeply into oblong ſegments, or rather compoſed of a number of theſe ſegments ſet on divided pedicles: on the tops of the branches grow large roſe-like flowers, followed each by two or more horned pods, internally of a deep red colour, containing roundiſh ſhining red or black ſeeds. The male ſort has dark green leaves, pale red ſingle flowers, long thick roots, and the ſtalks and pedicles ſtreaked with red: the female has longer narrower and paler leaves, deep red double flowers, and irregular roots compoſed of ſeveral tuberous pieces hanging by tough filaments from one head. They are both found wild in ſome parts of Europe, and cultivated with us in gardens: they are perennial, produce their flowers in May, and very ſoon ſhed them.

The male peony has been generally preferred for medicinal uſe: but the female, which is the largeſt and moſt elegant, and for this reaſon the moſt common, is the ſpecies which the ſhops have been principally ſupplied with. In quality, there does not appear to be any material difference betwixt the two; and hence the college allow both ſorts to be taken indiſcriminately.

The roots and ſeeds of peony have, when freſh, a faint unpleaſant ſmell, ſomewhat of the narcotic kind; and a mucilaginous ſubacrid taſte, with a ſlight degree of bitteriſhneſs and aſtringency. In drying, they loſe their ſmell, and part of their taſte. Extracts made from them by water are almoſt inſipid as well as inodorous; but extracts made by rectified ſpirit are manifeſtly bitteriſh and conſiderably aſtringent.

The leaves are nearly inodorous. To the taſte, the leaves themſelves diſcover a moderate degree of roughneſs, and their pedicles of ſweetneſs; both which are preſerved in great meaſure in the watery, but more perfectly in the ſpirituous extracts.

The flowers have rather more ſmell than any of the other parts of the plant, and a rough ſweetiſh taſte, which they impart, together with their colour, both to water and ſpirit: the watery infuſion leaves, on being inſpiſſated, a blackiſh red, auſtere, ſweetiſh, and ſomewhat bitteriſh extract: the ſpirituous tincture yields an extract of a beautiful bright red, of an agreeable though weak ſmell, a moderate aſtringency, and an almoſt ſaccharine ſweetneſs.

The roots, flowers, and ſeeds, are looked upon as lightly anodyne and corroborant; to the latter, at leaſt, of which virtues, they appear from the above experiments to have ſome claim. They have been principally recommended in ſpaſmodic and epileptic complaints; in which, we are afraid, their effects are not very conſiderable.

PALMA.

PALM: a tall unbranched tree, with long reed-like leaves elegantly diſpoſed on the top. Different ſpecies of it grow ſpontaneouſly in the eaſtern countries, and in the warmer parts of the Weſt Indies.

THE *palma major C. B. Phœnix dactylifera Linn.* is cultivated in ſome of the ſouthern parts of Europe. Its fruit, the dates of the ſhops, is of an oblong ſhape, like an acorn, but generally larger; and conſiſts of a thick fleſhy ſubſtance including, and freely parting from, an oblong hard ſtone, which has a remarkable furrow running its whole length upon one ſide. The beſt dates come from Tunis: they ſhould be choſen large, ſoftiſh, not much wrinkled, of a reddiſh yellow colour on the outſide, with a whitiſh membrane betwixt the fleſh and the ſtone. They have an agreeable ſweet taſte, accompanied with a ſlight aſtringency; and hence ſtand recommended in tickling coughs and thin acrid defluxions on the lungs, and in alvine fluxes. Among the Egyptians and Africans, they are ſaid to be a principal article of food, and when uſed too freely, to be difficult of digeſtion, occaſion headachs, ſometimes gripes, and, in length of time, obſtructions of the viſcera, cachectic, and melancholic diſorders.

Oleum expreſſum palmæ *Ph. Ed.*

THE *palma oleoſa (palma foliorum pediculis ſpinoſis, fructu pruniformi luteo oleoſo Sloan. jam.)* is a native of the coaſt of Guinea*(a)* and the Cape Verd iſlands, from whence it has been introduced into Jamaica and Barbadoes. From its fruit is extracted an oil, which, as brought to us, is about the conſiſtence of an ointment, of a ſtrong, not diſagreeable ſmell, and ſcarcely any particular taſte: by long keeping it loſes its high colour, and becomes white, and in this ſtate is to be rejected. The inhabitants of the Guinea coaſt are ſaid to employ the palm oil for the ſame purpoſes as we do butter. With us, it is only uſed in ſome external applications, for pains and weakneſs of the nerves, cramps, ſprains, and other like complaints. The common people ſometimes apply it to chilblains; and, when uſed early, not without benefit. It is ſaid to be peculiarly ſerviceable in hardneſs of the belly, both of adults and children *(a)*.

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*(a) According to Bergius, another ſpecies of the oil palm grows on the coaſt of Guinea and in Senegal, the *palma altiſſima non ſpinoſa, fructu pruniformi minore, racemo ſparſo Sloan. Jam.* & *Adanſon.*

THE medullary part of certain oriental palm trees *(palma indica caudice in annulos protuberantes diſtincto, fructu pruniformi, Raii. Sagus, ſeu palma farinaria Rumph. Amb. (b)* affords another article of food to the natives, and of the materia medica to us. The farinaceous medulla, freed from the filamentous matter with which it is inveloped, is beaten with water, and made into cakes, which are afterwards reduced into ſmall grains, and dried. The cakes are ſaid to be the bread uſed by the Indians in ſcarcity of rice: the grains are the ſago or ſagou of the ſhops. This ſubſtance, commonly recommended as a reſtorative in phthiſes and emaciations and for reſtraining fluxions, appears to be a light, moderately nutritious demulcent food; in which view it is by ſome directed *(c)* as a proper aliment for young children, in preference to the more tenacious and leſs digeſtible preparations of wheat flour. It diſſolves in water into a viſcid mucilage; is leſs aceſcent and flatulent than other farinæ; keeps longer in the grain, even for twenty years in a dry place, and alſo in its mucilaginous ſtate a long time *(d)*.

PAPAVER.

POPPY: a plant with oblong leaves, and round ſtalks, divided into a few branches, each of which is terminated by a large tetrapetalous flower, ſet in a two-leaved cup that falls off as the flower opens: the flower itſelf likewiſe ſoon falls, leaving a ſmooth roundiſh head or

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(a) Bergii Mat. Med. 882.

*(b) The *Cycas circinalis Linn.* has been given as the ſago plant, but, as Bergius ſuppoſes, erroneouſly.

(c) Albertus Seba, *Theſaur. vol.* i. *p.* 40. *Act. nat. curioſ. vol.* i. *Append.*

(d) Cullen, Mat. Med.

capſule, covered with a radiated crown, and containing a number of ſmooth roundiſh ſeeds. It is annual, and flowers from June to near the end of ſummer.

1. PAPAVER ALBUM *Pharm. Lond. & Edinb. Papaver hortenſe ſemine albo C. B. Papaver ſomniferum Linn.* White poppy: with ſmooth, ſlightly indented leaves; and whitiſh flowers and ſeeds.

2. PAPAVER NIGRUM: *Papaver hortenſe nigro ſemine C. B.* Black poppy: a variety of the former, with ſmooth, ſlightly indented leaves, purple flowers, and black ſeeds.

THESE plants are found wild in ſome parts of Europe; and ſeveral varieties of them, in regard to the flowers, are produced by culture in our gardens. The heads, ſtalk, and leaves, have an unpleaſant ſmell, and a bitteriſh biting taſte, of the ſame kind with thoſe of opium. Their ſmell and taſte is lodged in a milky juice; which abounds chiefly in the cortical part of the heads; which may be collected, in conſiderable quantity, by ſlightly wounding them when almoſt ripe; and which, on being expoſed for a little time to a warm air, thickens into a tenacious dark-coloured maſs, ſimilar to the opium brought from abroad, but ſtronger in ſmell and taſte. The juices thus obtained from the two ſorts of poppies, appear to be of the ſame quality, the difference being only in the quantity afforded: the white poppy, which is the largeſt, is the ſort cultivated by the preparers of opium in the eaſtern countries, and for medicinal uſes in this. *The following extract from Mr. Kerr's account of the culture of this plant, and the preparation of opium, in the province of Bahar in the Eaſt Indies, may convey uſeful information.

"The ſeeds are ſown in October or November. The plants are allowed to grow ſix or eight inches diſtant from each other, and are plentifully ſupplied with water. When the young plants are ſix or eight inches high, they are watered more ſparingly. But the cultivator ſtrews all over the areas a nutrient compoſt of aſhes, human excrements, cow-dung, and a large portion of nitrous earth, ſcraped from the highways and old mud-walls. When the plants are nigh flowering, they are watered profuſely to increaſe the juice.

"When the capſules are half grown, no more water is given, and they begin to collect the opium. At ſun-ſet they make two longitudinal double inciſions upon each half-ripe capſule, paſſing from below upwards, and taking care not to penetrate the internal cavity of the capſule. The inciſions are repeated every evening, until each capſule has received ſix or eight wounds; they are then allowed to ripen their ſeeds. The ripe capſules afford little or no juice. If the wound was made in the heat of the day, a cicatrix would be too ſoon formed.—The night-dews, by their moiſture, favour the exſtillation of the juice. Early in the morning old women, boys, and girls, collect the juice, by ſcraping it off the wounds with a ſmall iron ſcoop, and depoſite the whole in an earthen pot, where it is worked by the hand in the open ſun-ſhine, until it becomes of a conſiderable ſpiſſitude: it is then formed into cakes of a globular ſhape, and about four pounds in weight, and laid into little earthen baſins to be further exſiccated. Theſe cakes are covered over with the poppy or tobacco leaves, and dried until they are fit for ſale. Opium is frequently adulterated with cow-dung, the extract of the poppy-plant procured by boiling, and various other ſubſtances which they keep in ſecrecy."*(a)*

The collection of the pure milky juice of the poppy has not, among us, been as yet practiſed in large, or with a view to the ſupplying of the common demand of opium. Inſtead of this troubleſome proceſs, we extract the narcotic matter by menſtrua; the active parts of opium, as obſerved under that article, being completely diſſoluble both by water and rectified ſpirit. A portion of the herbaceous inert ſubſtance of the plant is indeed, at the ſame time, taken up, at leaſt when water is made uſe of, ſo as to render an enlargement of the doſe neceſſary: but this addition to the bulk of a doſe of opium would be of no inconvenience, if the compound was always of the ſame ſtrength, or the narcotic and inert matter in the ſame proportions to one another; a point which cannot be attained with ſo much preciſion as could be wiſhed, but which may nevertheleſs, by due care in the preparation, be adjuſted as nearly as common practice in moſt caſes requires.

The college of London directs the dried heads, cut and cleared from the ſeeds, to be boiled in water, in the proportion of three pounds and a half to ſix gallons, and now and then ſtirred to prevent their burning, till only about one third part of the liquor remains, which will be almoſt

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(a) Lond. Med. Obſ. and Inq. Vol. V. *p.* 318.

Syrup. e meconio ſive diacodion *P.L.*

Syrupus papaveris albi, *ſeu* de meconio, *vulgo* diacodion *Ph. Edinb.*

entirely ſoaked up by the poppies: the decoction is to be ſtrongly preſſed out, boiled down to about four pints, then ſtrained whilſt hot, firſt through a ſieve and afterwards through a fine woollen cloth, and ſet by for a night to ſettle: to the liquor, poured off clear, ſix pounds of double-refined ſugar are to be added; and the mixture boiled till its weight comes to nine pounds or a little more, that it may become a ſyrup of a proper conſiſtence. An ounce of this ſyrup is reckoned equivalent to about a grain of opium. *The Edinburgh college directs two pounds of poppy heads without the ſeeds to be macerated for a night in thirty pounds of boiling water, the liquor then boiled down till only a third part remains, which is to be ſtrongly expreſſed and ſtrained; then boiled again to the half, ſtrained, and made into a ſyrup with a ſufficient quantity of ſugar. They alſo allow this ſyrup to be made by diſſolving one dram of the extract of white poppy heads in two pounds and a half of ſimple ſyrup.

Extract. capitum papaveris albi *Phar. Edinb.*

A decoction of poppy heads in water, ſtrongly preſſed out, depurated by ſettling, then clarified with whites of eggs, and inſpiſſated, yields an extract amounting to one fifth or one ſixth the weight of the heads: it is ſaid, that two grains of this preparation are equivalent to one grain of opium, and that the extract is not liable to produce a nauſea or giddineſs which generally follow the uſe of pure opium *(a)*: but the conſequential effects which opiates produce, in different ſubjects, and in different circumſtances, are ſo variable, that the trials which have been made of this preparation, however ſucceſsful, do not appear ſufficient for eſtabliſhing this ſuperiority. Of tinctures or extracts made with ſpirituous menſtrua, no medicinal trials, ſo far as I can learn, have as yet been made: in ſmell and taſte they approach more to opium than any other preparation of the poppy I have ſeen.

Many have ſuppoſed the ſeeds of the poppy to be, like the other parts of the herb, narcotic *(b)*; miſled, perhaps, by analogical reaſoning from other plants. Though the ſeeds of many plants are more efficacious than the veſſel in which they are lodged; thoſe of the poppy have nothing of the narcotic juice which is diffuſed through their covering,

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(a) Mr. Arnot, *Edinburgh medical eſſays*, *vol.* v. *art.* 11.

(b) Hermann, *Cynoſur. mat. med. Edit. Boecler, p.* 436. Juncker, *Conſpectus therapiæ generalis, p.* 279.

through the ſtalks, and more ſparingly through the leaves. If emulſions of poppy ſeeds have been found ſerviceable in coughs, catarrhs, heat of urine, and other like diſorders; it is not to an anodyne, but an emollient quality, that this virtue is to be aſcribed. The ſeeds in ſubſtance have a ſweetiſh unctuous farinaceous taſte, and yield upon expreſſion a large quantity of inſipid oil: both the ſeeds themſelves and the oil are ſaid to be in ſome places common articles of food *(a)*.

3. PAPAVER ERRATICUM *Pharm. Lond.* *Papaver erraticum majus C. B.* *Papaver Rhœas Linn.* Wild or red poppy, or corn-roſe: with deep red flowers, dark-coloured ſeeds, hairy leaves and ſtalks, and the leaves cut almoſt, or quite, to the pedicle into indented ſegments. It is common in corn-fields; and is ſometimes, like the others, made to vary its flowers by culture.

THE heads of this ſpecies appear to contain the ſame kind of narcotic juice with thoſe of the two preceding, but in ſo much ſmaller quantity that they are wholly neglected. The only part made uſe of is the flowers, which are ſuppoſed to be likewiſe impregnated in ſome degree with the ſame anodyne principle, and ſtand recommended in catarrhs, coughs, ſpitting of blood, and other diſorders: they have a ſlight narcotic ſmell, and a very mucilaginous taſte, accompanied with a ſenſible bitteriſhneſs. They are at preſent regarded rather on account of their colour, than for any great virtues expected from them: they yield upon expreſſion a deep red juice, and impart the ſame colour to watery liquors, and a brighter though paler red to rectified ſpirit. A ſtrong infuſion of them is prepared in the ſhops, by pouring four pints and a half of boiling water upon four pounds of the freſh flowers, ſtirring them over the fire till the flowers are all immerged, and ſetting them by to ſteep for a night: without the application of fire ſo as to ſcald or ſhrink the flowers a little, they can ſcarcely be moiſtened with the water; if the heat is continued longer than this effect is produced, the liquor turns out quite ſlimy. This infuſion, preſſed out and depurated by ſettling, is reduced, by a proper addition of ſugar, into a deep red ſyrup. The colouring matter of the red poppy

Syr. papav. errat. *Ph. L.*

(a) Proſper Alpinus, *De medicina Ægyptiorum, lib.* iv. *cap.* 1. Geoffroy, *Mat. med. tom.* ii. *p.* 715. Linnæi, *Amœnitat. Academic.* iii. 71.

differs from that of clove-gilly flowers, red roſes, and other bright red flowers, in this; that on the admixture of alkaline liquors, it does not change, like them, to a green, but to a dark purple.

PARALYSIS.

PARALYSIS: a plant with oblong wrinkled leaves, hairy on the upper ſides of the ribs; and naked ſtalks, bearing monopetalous flowers, each of which is divided about the edge into five ſegments, and ſet in a looſe tubulous, ridged cup, which, after the flower has fallen, incloſes a huſk full of roundiſh ſeeds. It is perennial, and flowers early in the ſpring.

1. Paralysis *Pharm. Lond. Verbaſculum pratenſe odoratum C. B. Primula veris major Gerard. Primula veris officinalis Linn.* Cowſlip, paigil, or peagle: with ſeveral flowers ſet together on one ſtalk, of a deep yellow colour, drooping downwards. It grows wild in marſhes and moiſt meadows.

Cowslip flowers have a moderately ſtrong pleaſant ſmell, and a ſomewhat roughiſh bitteriſh taſte; both which they impart, together with a yellow tincture, to watery and to ſpirituous menſtrua. Vinous liquors, impregnated with their flavour by maceration or fermentation, and ſtrong infuſions of them drank as tea, are ſuppoſed to be mildly corroborant, antiſpaſmodic, and anodyne. An infuſion of three pounds of the freſh flowers in five pints of boiling water is made in the ſhops into a ſyrup, of a fine yellow colour, and agreeably impregnated with the flavour of the cowſlips.

Syr. e flor. paralyſis *Pharm. Lond.*

2. Primula veris *Pharm. Edinb.*(a) *Primula veris minor Ger. Verbaſculum ſilveſtre majus ſingulari flore C. B. Primula veris acaulis Linn.* Primroſe: with pale yellow ſolitary flowers. It grows wild in woods and hedges.

The flowers of this ſpecies are much weaker and leſs agreeable in ſmell than thoſe of the preceding. The leaves and the roots ſeem to partake in ſome degree of the nature of thoſe of aſarum; acting as ſtrong errhines or ſternutatories, when ſnuffed up the noſe, and as emetics (the roots at leaſt) when taken internally. Gerard reports, as from the experience of a ſkilful practitioner, that "a dram and a half of the powder of the dried roots (taken up in autumn) purgeth by vomit very forcibly, but ſafely, in ſuch manner as aſarum doth."

(a) Expunged.

PAREIRA.

PAREIRA BRAVA Pharm. Edinb.(a) *Pareyra, Ambutua, Butua, Overo brutua, Zan. hiſt. Pharm. Pariſ.* PAREIRA BRAVA: the root of an American climbing plant (*convolvulus brazilianus flore octopetalo monococcos Raii hiſt. Ciſſampelos Pariera Linn.*) brought from Brazil, generally in crooked pieces of different ſizes, ſome no bigger than the finger, others as large as a child's arm: the outſide is browniſh and variouſly wrinkled; the internal ſubſtance of a pale dull yellowiſh hue, and interwoven as it were with woody fibres, ſo that on a tranſverſe ſection, there appears a number of concentric circles, croſſed with ſtriæ running from the center to the circumference.

THIS root is extolled by the Braſilians and Portugueſe in a variety of diſeaſes, particularly in ſuppreſſions of urine and in nephritic and calculous complaints. Geoffroy is of opinion, that its virtue conſiſts in diſſolving and attenuating tenacious juices; and reports, that in ſundry diſorders ariſing from their viſcidity, it was found remarkably beneficial: that in nephritic pains and ſuppreſſions of urine, he has often given it with happy ſucceſs: that he has ſometimes ſeen the patient freed from pain almoſt in an inſtant, and a plentiful diſcharge of urine brought on: that in ulcers of the kidneys and bladder, where the urine was mucous and purulent, and could ſcarcely be voided, or not without great uneaſineſs, the ſymptoms were ſoon relieved by pareira, and the ulcer at length healed by joining to it balſam of copaiba: that in an aſthmatic caſe, where the patient was almoſt ſuffocated by thick phlegm, an infuſion of pareira, after many other medicines had been tried in vain, brought on a copious expectoration, which proved a ſolution of the diſeaſe: that a perſon who, from an acute pain under the liver, had become in a few hours icterical, had the pain relieved, after bleeding, by the third cup of the decoction, and all the ſymptoms removed by a continuance of it; and that the ſame diſorder frequently returning, ſhe always found relief from the ſame medicine: but that in another icterical caſe, where the liver was ſwelled, it did no good. He cautions againſt giving too large doſes, which might, he obſerves, raiſe a heat, and perhaps an inflammation in the kidneys: of the root in ſubſtance he preſcribes from twelve grains to half a dram, and in decoction or infuſion two or three drams; this quantity of the root, bruiſed, he directs to be boiled in a pint and a half of water till only a pint remains, which is to be ſtrained off, ſweetened with a little ſugar, divided into three portions, and drank as tea at intervals of half an hour.

(a) Expunged.

The uſe of this root has not been in general accompanied with ſo much ſucceſs: but though, like many other medicines, it has not been found to anſwer the character at firſt given of it, and has thence fallen into neglect, we may preſume, from its ſenſible qualities, that it is not deſtitute of medical virtue. It has no remarkable ſmell; but to the taſte it manifeſts a notable ſweetneſs, of the liquorice kind, together with a conſiderable bitterneſs and a ſlight roughneſs covered by the ſweet matter. It gives out great part both of the bitter and the ſweet ſubſtance to watery and ſpirituous menſtrua: in evaporating the watery decoction, a conſiderable quantity of reſinous matter ſeparates, which does not mingle with the remaining extract or diſſolve in water, but is readily taken up by ſpirit; whence ſpirit appears to be the moſt perfect diſſolvent of its active parts. Both the ſpirituous tincture and extract are in taſte ſtronger than the watery.

PARIETARIA.

PARIETARIA Pharm. Lond. & Edinb. Parietaria officinarum & dioſcoridis C. B. Parietaria officinalis Linn. PELLITORY OF THE WALL: a plant with tender reddiſh ſtalks; rough, uncut, oblong leaves, pointed at both ends; and imperfect rough flowers, growing in cluſters along the ſtalks, followed each by a ſmall ſhining ſeed. It is perennial, common on old walls and among rubbiſh, and flowers in May.

The leaves of pellitory of the wall have been uſed in cataplaſms for diſcuſſing inflammatory ſwellings: decoctions of them, and their expreſſed juice, have been given as emollient diuretics in nephritic caſes and iſchuries, and are ſaid, when long perſiſted in, to be uſeful aperients or ſweeteners in cutaneous defedations. The plant appears to be of no great activity, being rather oleraceous than medicinal: to the taſte, the leaves in ſubſtance and their juice, are little other than herbaceous and watery.

PASTINACA.

PASTINACA: an umbelliferous plant, with naked umbels, yellow flowers, and flat ſeeds ſurrounded with a leafy margin: the leaves are oblong, and ſtand in pairs on a middle rib, without pedicles.

1. Pastinaca: *Paſtinaca latifolia ſativa C. B. Paſtinaca ſativa Linn.* Garden parſnep: with pale-coloured ſmooth indented leaves, and a large fleſhy root.

2. Elaphoboscum: *Paſtinaca ſilveſtris latifolia C. B. Bancia & branca leonina quibuſdam.* Wild parſnep: with dark green rough indented leaves and ſlender woody roots; common about the ſides of fields; flowering, as the other, in June and July, and ripening its ſeeds in September. The garden ſort is ſuppoſed to be only a variety of this, and to owe its differences to culture.

The roots of the garden parſnep, in taſte conſiderably ſweetiſh, are accounted a very nutritious aliment: they yield with rectified ſpirit a very ſweet extract, and in diſtillation with water a ſmall portion of eſſential oil poſſeſſing the ſpecific flavour of the roots. It is ſaid that by ſtanding in the ground for ſome years, it contracts pernicious qualities, ſo as to occaſion diſorders of the ſenſes *(a)*.

The ſeeds of the garden ſort are ſomewhat aromatic; thoſe of the wild a little more ſo; of conſiderable ſmell, but no great pungency or warmth. By infuſion, they impregnate water moderately with their

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(a) Ray, *Hiſtoria plantarum,* i. 420. Dan. Hoffman, *Acta acad. cæſar. nat. curioſor. vol.* vi. *anno* 1742. *obſ.* 128. *p.* 426.

ſmell, but communicate very little taſte: in diſtillation they give over a ſmall quantity of a pale yellowiſh eſſential oil, in taſte moderately pungent, and ſmelling ſtrongly of the ſeeds: five pounds of the ſeeds of the garden parſnep yielded little more than a dram. Rectified ſpirit takes up by digeſtion the whole of their active matter, and carries off little in the inſpiſſation of the tincture: the extracts of both ſorts have a moderate warmth and bitteriſhneſs, differing in degree as the ſeeds themſelves. Theſe ſeeds have been commended as diuretics, ſimilar to thoſe of daucus, but weaker, which, in their ſenſible qualities, they apparently are: Haller reports, that thoſe of the wild ſpecies, made into pills, with extract of liquorice, were much uſed by Boerhaave againſt nephritic complaints and ulcerations of the bladder.

3. PANAX: *Panax heracleum Moriſon. Panax paſtinacæ folio C. B. Sphondylio vel potius paſtinacæ germanicæ affinis panax vel pſeudocoſtus flore luteo J. B. Laſerpitium Chironium Linn.* Hercules's allheal or woundwort: with uncut leaves, ſomewhat heart-ſhaped, but having one of the ſides lower than the other: the middle ribs, bearing the ſeveral ſets of leaves, ſtand in pairs along a larger rib. It is a native of the warmer climates, and bears the colds of our own.

BOTH the ſeeds and the roots of this ſpecies are conſiderably warmer than thoſe of the two preceding. The roots and ſtalks have a ſtrong ſmell and taſte reſembling thoſe of opopanax; and Boerhaave relates, that on wounding the plant in ſummer, he obtained a yellow juice, which, being inſpiſſated a little in the ſun, agreed perfectly, in both reſpects, with that exotic gummy-reſin.

PENTAPHYLLUM.

PENTAPHYLLUM Pharm. Lond. Quinquefolium majus repens C. B. Potentilla reptans Linn. CINQUEFOIL, or FIVE-LEAVED GRASS: a trailing plant, with oval ſerrated leaves, ſet five together on long pedicles, and pentapetalous yellow flowers ſtanding ſolitary on like pedicles: the cup is divided into ten unequal ſegments, the five innermoſt of which form a covering to a button of ſeeds: the root is long and ſlender, dark coloured on the outſide, and reddiſh within. It is perennial, grows wild on open clayie grounds, and flowers in June.

The roots of pentaphyllum are mild aſtringents, and give out their aſtringent matter both to water and ſpirit. They have been uſed in diarrhœas and other fluxes, in intermitting fevers, ſometimes as corroborants and antiſeptics in low colliquative acute fevers, in gargariſms for ſtrengthening the gums, &c. Their virtue is confined chiefly to the red cortical part, the whitiſh woody fibre in the middle being nearly inſipid.

PERSICA.

PERSICA MALUS Pharm. Edinb.(a) *Perſica molli carne vulgaris viridis & alba C. B. Amygdalus Perſica Linn.* Peach: a tree common in gardens; with oblong, narrow, pointed, ſerrated leaves; pale reddiſh flowers, compoſed of five broad petala with numerous ſtamina in the middle, ſet in five-leaved reddiſh cups, adhering to the branches without pedicles; and a fleſhy fruit covered with downy matter and including a furrowed ſtone.

The flowers of the peach tree have an agreeable but weak ſmell, and a bitteriſh taſte: Boulduc obſerves, that when diſtilled without addition, by the heat of a water-bath, they yield one ſixth their weight or more of a whitiſh liquor, which communicates, to a conſiderable quantity of other liquids, a flavour like that of the kernels of fruits. Theſe flowers appear to be gently laxative: it is ſaid, that an infuſion in water of half an ounce of the freſh gathered flowers, or of a dram of them when dried, ſweetened with ſugar, proves, for children, an uſeful purgative and anthelmintic; and that the leaves, more unpalatable than the flowers, are ſomewhat more efficacious. The fruit is of the ſame quality with the other dulco-acid ſummer fruits: ſee *Fructus horæi.*

PERSICARIA.

ARSMART: an annual plant with oblong uncut leaves pointed at both ends, and imperfect flowers ſet in ſpikes on the tops of the ſtalks:

(a) Expunged.

the cup is thick and fleſhy, divided into five oval ſegments, which, cloſing, form a cover to an angular gloſſy ſeed.

1. Persicaria mitis: *Perſicaria mitis maculoſa C. B. Pharm. Pariſ. Plumbago. Polygonum Perſicaria Linn.* Spotted arſmart; ſo called from moſt of the leaves having a blackiſh ſpot in the middle. It grows wild in moiſt watery places, and flowers in July.

This plant is ſaid to be a good vulnerary and antiſeptic; and decoctions of it in wine, to reſtrain the progreſs of gangrenes *(a)*. It has a ſlightly acerb taſte inclining to acidity, and no remarkable ſmell.

2. Persicaria urens *Pharm. Edinb.* *(b)* *Perſicaria urens ſive hydropiper C. B. Polygonum Hydropiper Linn.* Biting arſmart, lakeweed, water pepper: diſtinguiſhed from the former by the ſpikes of flowers being ſlenderer; the leaves ſhorter, narrower, and without any ſpots; but more remarkably by its taſte. In our markets, a plant of a different genus, the ſecond of the *ranunculi* hereafter deſcribed, is ſometimes ſold for it.

The leaves of this ſpecies have an acrid burning taſte, and ſeem to be nearly of the ſame nature with thoſe of arum; their acrimony not riſing in diſtillation, and being deſtroyed in the proceſs *(c)*. They are commended as antiſeptic, aperient, diuretic; in ſcurvies and cachexies, humoural aſthmas, hypochondriacal and nephritic complaints, and in the wandering gout. The freſh leaves have been ſometimes applied externally, in ſtimulating cataplaſms, and for cleanſing foul ulcers and conſuming fungous fleſh; in which laſt intention they are ſaid to be uſed by the farriers.

(a) Tournefort, *Memoires de l'acad. des ſcienc. de Paris, pour l'ann.* 1703. *(b)* Expunged.

(c) Rutty, *Synopſis of mineral waters, p.* 524. Dr. Cullen however ſays, "its acrimony operates chiefly on the kidneys. What is remarkable, it gives out its diuretic virtue in diſtillation to water." *Mat. Med.* 308.

PERUVIANUS CORTEX.

PERUVIANUS CORTEX Pharm. Lond. & Edinb. PERUVIAN BARK: the bark of a middling-ſized tree, growing in Peru, called by the Spaniards, from its efficacy againſt intermitting fevers, *palo de calenturas*, or the fever tree; by Linnæus, *Cinchona officinalis.* This virtue of the bark is ſaid to have been diſcovered by the Indians about the year 1500, but not revealed to their European maſters till 140 years after; when a ſignal cure having been performed by it on the Spaniſh viceroy's lady, the counteſs del Cinchon, it came into general uſe in thoſe parts, and was diſtinguiſhed by the appellations *pulvis comitiſſæ*, *cortex china china* or *chinchina*, *kina kina* or *kinkina*, and *quina quina* or *quinquina.* In 1649, a jeſuit brought a large quantity of it into Italy, which was diſtributed by the fathers of that order, at a great price, in different parts of Europe: about the ſame time a quantity was purchaſed by cardinal de Lugo for the uſe of the poor at Rome. From theſe it received the names of *cortex* or *pulvis jeſuiticus*, *pulvis patrum*, and *pulvis cardinalis de Lugo.*

This bark is brought to us in pieces of different ſizes, ſome rolled up into ſhort thick quills, and others flat: the outſide is browniſh, and generally covered in part with a whitiſh moſs: the inſide is of a yellowiſh, reddiſh, or ruſty iron colour. The beſt ſort breaks cloſe and ſmooth, and proves friable betwixt the teeth: the inferiour kinds appear when broken of a woody texture, and in chewing ſeparate into fibres. The former pulveriſes more eaſily than the latter, and looks, when powdered, of a light browniſh colour, reſembling that of cinnamon, but ſomewhat paler.

A bark was ſome time ago brought from America under the name of the female Peruvian bark. This was found, from experience, to be leſs effectual as a medicine than the genuine ſort, which it was frequently ſubſtituted to or mixed with in France, inſomuch that its importation, as the editor of Geoffroy informs us, was prohibited by law. It is conſiderably thicker, whiter on the outſide, redder within, and weaker in ſmell and taſte than the true bark.

PERUVIAN bark has a ſlight ſmell, approaching as it were to muſtineſs, yet ſo much of the aromatic kind as not to be diſagreeable. Its taſte is conſiderably bitter, aſtringent, very durable in the mouth, and accompanied with ſome degree of aromatic warmth, but not ſufficient to prevent its being ungrateful.

The febrifuge virtue, for which alone this medicine was at firſt recommended, has now been eſtabliſhed by the daily experience of about a century: and that, when judiciouſly and ſeaſonably adminiſtered, it proves as ſafe as it is effectual, is now alſo beyond diſpute. An emetic, which is in moſt caſes neceſſary, being taken towards the approach of a paroxyſm, that its operation may be over before the fit comes on; the bark is begun at the end of the paroxyſm, or even in the time of the hot fit, and repeated, in doſes of half a dram or more, every third or fourth hour, during the intermiſſion: after the fever has been removed, the medicine is continued for a time, but more ſparingly, to prevent a return. During the uſe of the bark, the pulſe, which betwixt the paroxyſms is generally weak and ſlow, becomes ſtronger and quicker, the appetite mends, the patient grows more cheerful, and perſpiration increaſes: theſe may be looked upon as ſure preſages of its ſucceſs. At firſt it frequently occaſions a looſeneſs, and this alſo is ſalutary; but if the purging runs on too long, as the fever rarely yields while this evacuation continues, it is uſually checked by the addition of a little opium: if too great coſtiveneſs enſues, recourſe is had to glyſters. In groſs impure habits, gentle purgatives are premiſed to the bark, or given for a time in conjunction with it: in agues of the inflammatory kind, or accompanied with great heat, a little nitre is joined or interpoſed: in lax ſpongy conſtitutions, and a thin watery ſtate of the blood, the bark is aſſiſted by bitters, ſnakeroot, camphor, and chalybeates: where obſtructions of the abdominal viſcera are apprehended, it is not ventured on without the addition of fixt alkaline ſalts, ſal ammoniac, or other aperients. In all caſes, moderate exerciſe, and the drinking of warm liquids, promote its effects. As the bark is hurtful in the inflammatory diatheſis, it is not near ſo effectual in vernal, as in ſummer and autumnal intermittents *(a)*.

In remitting fevers, this medicine is leſs ſucceſsful than in thoſe which have perfect intermiſſions: in hectics, or wherever pus is formed, or juices are extravaſated, it does harm. In the decline of long nervous

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(a) Cull. Mat. Med. 292.

fevers or after a remiſſion, and in thoſe of the low malignant kind where the blood is colliquated and the ſtrength exhauſted, it proves an excellent cordial, corroborant, and antiſeptic.

Peruvian bark has likewiſe been found ſerviceable in gangrenes and mortifications, and in foul obſtinate ulcers and running ſores of other kinds: in theſe caſes, taken in large and repeated doſes, it frequently brings on a laudable ſuppuration, which degenerates on diſcontinuing the uſe of the medicine, and again turns kindly upon reſuming it. The like effects have been obſerved from it in variolous caſes, where either the puſtules did not duly ſuppurate, or petechiæ ſhewed a diſpoſition to a gangrene: by the uſe of bark, the empty veſicles filled with matter, watery ſanies changed into thick white pus, and the petechiæ became gradually paler and at length diſappeared. The principal ſymptom in this diſeaſe that contraindicates this valuable ſuppurant and antiſeptic, is great obſtruction at the breaſt or difficulty of breathing; which are always by this medicine increaſed, inſomuch that ſmall doſes have in ſome caſes endangered ſuffocation.

In tumours of the glands, the Peruvian bark appears to promote, not ſuppuration, but reſolution. In the medical obſervations and inquiries publiſhed by a ſociety of phyſicians in London, there are ſeveral inſtances of its being given with ſucceſs in ſcrophulous complaints. Dr. Fothergill obſerves, that inveterate ophthalmiæ generally yield to it: that beginning glandular tumours are very frequently reſolved and their farther progreſs ſtopt by it: that ſwelled lips, cutaneous blotches ariſing from a like cauſe, are healed, and the tendency to a ſtrumous habit corrected: that it does not ſucceed in all caſes, but that there are few in which a trial can be attended with much detriment: that he has never known it to avail where the bones were affected, or where the ſcrophulous tumour was ſo ſituated as to be attended with much pain, as in the joints or under the membranous covers of the muſcles; for when it attacks theſe parts, the perioſteum, and conſequently the bone, ſeldom eſcape being injured; that here the bark, inſtead of leſſening, adds to the fever which accompanies theſe circumſtances, and if it does not increaſe the force of the miſchief, ſeems at leaſt to haſten its progreſs.

Peruvian bark has been applied likewiſe, in conjunction with other appropriated medicines, and often with good ſucceſs, to the cure of periodic headachs, hyſterical, hypochondriacal, vertiginous and epileptic complaints, and other diſorders that have regular intermiſſions. By its bitterneſs, aſtringency, and mild aromatic warmth, it ſtrengthens the whole ſyſtem, and proves a medicine of great utility in weakneſs of the ſtomach, uterine fluxes, and ſundry chronical diſeaſes proceeding from a laxity and debility of the fibres. To ſtrengthen the ſolids appears indeed, in all caſes, to be its primary operation; and its ſalutary virtues in different diſeaſes, to be no other than conſequential effects of this general power. In all the diſtempers where bark is known to take place, other aſtringent and bitter medicines, ſingly or combined, have likewiſe been of ſervice, though not equally with this natural combination of them*(*a*).

The virtues of this bark are very difficultly extracted by long coction in water, and part of what the liquor is by heat enabled to take up begins to ſeparate as ſoon as it is cold. This reſinous part, which is rather melted out by the boiling heat than diſſolved by the water as a menſtruum, ſeems to contain chiefly the aſtringency of the drug: the bitter matter appears to be perfectly diſſoluble, though more difficult to be got completely out. *After repeated infuſion in cold water, till the liquor came off colourleſs and ſuffered no change from ſolution of vitriol, warm water extracted a conſiderable colour, and vitriol produced with this infuſion an opake black: after warm water would extract no more, very hot water received a deeper colour than that of the ſtrongeſt cold infuſion of freſh bark; and this likewiſe ſtruck a deep black with vitriol: boiling water had the ſame effect, after very hot water had ceaſed to act(*b*).

On boiling a pound of finely powdered bark for an hour or two in five or ſix quarts of water, the decoction whilſt hot looks clear and reddiſh, but in cooling becomes turbid and of a pale yellowiſh or wheyiſh hue: in this ſtate it is found to partake, in a great degree, both of the bitterneſs and aſtringency of the bark, but in proportion as it depoſites the matter that made it turbid, it loſes more and more of its ſtypticity, the bitterneſs ſeeming to continue undiminiſhed. The remaining bark, boiled in freſh water, exhibits the ſame appearances for two or three

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*(*a*) Dr. Percival found, that on mixing infuſion of bark with putrid ox gall, an inſtant coagulation enſued, and the fœtor was increaſed. Hence he accounts for the diſagreement of this medicine in the bilious fevers of the Weſt Indies. *Eſſ. Med. and Exper.* Vol. II. *p.* 24.

(*b*) *M. S. of Dr. Lewis.*

times ſucceſſively; and when, at length, it ceaſes to render the water turbid, it imparts a bitterneſs without aſtringency*(a)*, retaining ſtill ſome ſhare of bitterneſs itſelf. The vapour which exhales in the firſt coction being caught in proper veſſels, condenſes into a limpid liquor which ſmells ſtrongly of the bark; though no ſeparable oil is obtained on ſubmitting many pounds to the operation. The ſeveral decoctions, ſtrained and inſpiſſated together, yield an extract, rather leſs bitter, and much leſs ſtyptic, than the bark in ſubſtance: this extract is kept in

Extr. cort. peruv. molle & durum *Ph. Lond.*

(a) In the above experiments, I judged of the aſtringency only from the taſte: ſolution of chalybeate vitriol, ſo uſeful on other occaſions for diſcovering aſtringent matter in vegetable decoctions or infuſions, ſeemed here to fail; for having often mixed it, in different quantities, with even the firſt decoctions of bark, it produced, not a black, but a deep green. I have ſince obſerved, that when the vitriolic ſolution is uſed in very ſmall proportion, it ſtrikes a black with the turbid decoctions of bark, as with other aſtringents; and that even the green mixtures, reſulting from a greater addition of the vitriol, on being largely diluted with water, become black or blueiſh like diluted ink. The reſinous matter, which ſubſides on ſtanding from the turbid decoctions, being diſſolved in ſpirit of wine, gave likewiſe a black with vitriol. But when the bark had been boiled in freſh waters, till it no longer gave any turbidneſs to the liquor, the laſt tranſparent decoctions, though ſtill pretty ſtrong in taſte, gave no blackneſs at all.

Some doubts having ariſen with regard to this experiment, I have repeated it twice, and found the event both times the ſame as before. The laſt decoctions, on dropping in the chalybeate ſolution, contracted indeed a ſlight duſky hue, which in certain poſitions might be miſtaken for a low degree of blackneſs; but the mixtures, held between the eye and the light, appeared only of a kind of olive yellowiſh or browniſh colour, and, on ſtanding for a little while, depoſited, not a black, but an ochery precipitate; whereas the firſt infuſions or decoctions, though ſo far diluted with water as ſcarcely to diſcover any taſte, ſtruck a blueiſh colour like that of diluted ink, and what little precipitate could be ſeparated was black.

After the boiling of the bark in water had been repeated till the filtered liquor no longer made any change with ſolution of vitriol, the remaining bark gave no tincture at all to rectified ſpirit.

But freſh bark, boiled in ſucceſſive portions of rectified ſpirit, till it ceaſed to impart any colour to the menſtruum, gave ſtill a deep tincture to boiling water; and this decoction, on the addition of ſolution of vitriol, exhibited nearly the ſame appearances as the laſt decoctions above mentioned, only in a higher degree, the precipitate being much more copious, and its colour deeper.

Though by repeated boilings in water the bark may be ſo exhauſted as to give out nothing to ſpirit, but after the repeated action of ſpirit ſtill gives out ſomething to water; yet ſpirit appears to be the moſt active menſtruum of its medicinal parts. For all, that ſpirit can diſſolve, is extracted by a far leſs quantity of ſpirit than of water; and what ſpirit leaves undiſſolved is of little taſte. Equal quantities of bark being digeſted for the ſame length of time with equal quantities of water and rectified ſpirit, with or without heat; the ſpirituous tinctures proved always ſtronger in taſte than the watery, and left on evaporation a larger proportion of extract * ||.

* || This aſſertion ſeems contrary to the reſult of ſome experiments by Dr. Percival, related in his firſt Vol. of *Eſſ. Med. and Exper.* p. 91, in which a dram of bark infuſed ſeven days in three ounces each of rectified ſpirit, proof ſpirit, and water, loſt in the firſt, ſix grains; in the ſecond, eight and a quarter; and in the third, eight. Theſe accounts can be reconciled only upon the ſuppoſition that watery liquors do, indeed, extract more of the inert gummy matter of bark; but ſpirituous, more of the active matter.

the ſhops in a ſoft and a hard form; the one of a proper conſiſtence for making into pills; the other fit for being reduced into powder.

As this drug gives out its virtue ſo difficultly and imperfectly to boiling water, it has not been ſuſpected that cold water would have any conſiderable action on it: I have nevertheleſs found, that an infuſion in cold water, though perfectly tranſparent, is rather ſtronger in taſte than even the turbid decoction, though the latter has ſomewhat more of a kind of fulneſs in the mouth *(a)*. It is by means of a gummy matter in vegetables, that the reſinous parts become diſſoluble in watery liquors; and it ſeems probable that, in boiling, part of the gummy principle of the bark is haſtily diſſolved and diſunited from the reſinous, whereas cold water, acting more gradually, extracts them both together. I have given the infuſions in intermitting fevers as well as other diſorders, with all the ſucceſs that could have been expected from any preparation of this valuable medicine: the proportions commonly followed were, one ounce of the bark in fine powder, and eight or twelve of water, which were macerated without heat for twenty-four hours *(b)*, and the clear liquor given in doſes of two or three ounces.

It

(a) I have endeavoured to compare the ſtrength of the two preparations by characters that may be thought more ſatisfactory than the taſte. A cold infuſion and decoction were made with equal quantities of bark and water, and both liquors paſſed through a filter: the infuſion ran through faſt; the decoction exceeding ſlowly, and continued turbid and opake after filtration. The two liquors, examined hydroſtatically, were found very nearly of the ſame ſpecific gravity. Equal quantities of them being turned black with equal quantities of ſolution of vitriol, the quantity of water neceſſary for diluting the blackneſs of the mixtures to an imperceptible degree, was very nearly the ſame for both. Theſe experiments were often repeated, and ſeemed to prove, that the infuſion and decoction are not conſiderably different in the quantity of matter taken up from the bark, but that this matter is in the cold infuſion tranſparently diſſolved, whereas in the decoction great part of it is only diffuſed through the liquor in an undiſſolved ſtate.—In the infuſion itſelf, however, the ſolution does not appear to be very intimate. The tranſparent liquor becomes in a day or two turbid, and on ſtanding for ſome weeks (being now and then ſhaken to prevent its growing mouldy) depoſites ſo much of the reſinous part, that it is in taſte ſimply bitter, and produces no blackneſs with vitriol. The reſinous ſediment gives to ſpirit of wine a dark-coloured aſtringent tincture, which ſtrikes a black with vitriol like the tincture of bark itſelf.

(b) Since the above account was written, this preparation has been received in general practice, and found to anſwer the character here given of it. The time of maceration has been diminiſhed to twelve hours, and ſome late experiments ſhew, that it may be ſtill further reduced, without any injury to the medicine. A mixture of one part of bark and eight of water being filtered after ſtanding for one hour, the liquor appeared, from its taſte, from its colour, from its ſpecific gravity, and from the trial with ſolution of vitriol, to be very nearly, if not fully, as ſtrong,

It is a common opinion, that bark in ſubſtance is more effectual than any preparation of it. Thus much is plain, that the infuſions, as well as the decoctions, have not near ſo much effect as the quantity of bark they were made from, as the menſtruum does not in either caſe completely extract its active matter: but their effects are evidently the ſame in kind, and the difference in degree may be compenſated by an increaſe in the quantity.

The turbid decoctions, on the addition of any of the concentrated mineral acids, in the proportion of one drop to about a quarter of an ounce, become tranſparent, of a bright pale yellow colour, and of a rougher or more acerb taſte, but with the loſs of their bitterneſs: the vegetable acids, added in proportionably larger quantity, render them likewiſe tranſparent and improve their roughneſs, without much diminiſhing their bitterneſs: all theſe mixtures depoſite, on ſtanding, a little powdery ſediment. Alkalies, both fixt and volatile, occaſion a more copious precipitation, and inſtead of making the turbid decoctions clear, make the clear turbid.

Rectified ſpirit of wine receives from bark a deep reddiſh brown colour, and takes up much more of its active matter than watery liquors *(a): by digeſting the powder firſt in ſome rectified ſpirit, and then boiling it in water, nearly the whole of its virtue is pretty readily got out. On inſpiſſating the filtered tincture, the ſpirit carries off nothing remarkable of its ſmell or taſte: the remaining extract retains the peculiar flavour of the bark, as well as its aſtringency and bitterneſs, and proves a very elegant preparation, preferable to the pure reſin obtained by precipitation from the tincture by water, as containing a part of the gummy matter, which is a medicinal principle of the bark as well as the reſin. The ſpirituous tincture, and the decoction of the reſiduum, may be united into an extract, poſſeſſing this advantage in a greater degree, by inſpiſſating them ſeparately to the conſiſtence of a ſyrup, then mixing them together, and continuing the evaporation with a gentle heat.

Extr. cort. peruv. *P. E.*

ſtrong, as thoſe which had ſtood 2, 4, 6, 8, 12, 24 hours. On doubling the quantity of bark, and ſhaking it with the water for only two or three minutes, the liquor proved rather ſtronger than any of the preceding; and being afterwards kept 24 hours on the ſame bark, it gained no ſenſible addition to its ſtrength. So that a very ſtrong infuſion may be obtained in a very expeditious manner.

*(a) See Dr. Percival's different opinion, at the note in page 489.

Proof-ſpirit extracts leſs from bark than rectified ſpirit, but more than water. Four ounces of the powder, macerated for ſome hours without heat, in a quart† or two pounds and a half‡ of proof ſpirit, impart a conſiderable degree both of bitterneſs and aſtringency: on applying heat†, the taſte becomes ſtronger, the colour darker, and the liquor ſomewhat turbid; from whence it may be concluded, that the reſinous part is not by this menſtruum completely diſſolved.

† Tinct. cort. peruv. *P. L.*
‡ *Ph. Edinb.*

Tinct. cort. peruv. vol. *Pharm. Lond.*

Spirit of ſal ammoniac made with fixt alkaline ſalt, by maceration with powdered bark in the above proportion, receives from it very little taſte or colour. The ſpirit prepared with quicklime, and the dulcified ſpirit, extract in a few hours a very deep colour, and become ſtrongly impregnated with its virtue. Though the ſpirit made with quicklime is held too acrimonious to be given internally by itſelf, it is not liable to that objection here; its pungency being ſheathed by the ſubſtance which it diſſolves.

Among the ſeveral ſubſtances which I have tried for covering the taſte of bark, to ſome perſons offenſive, liquorice ſeemed to anſwer the beſt. Aromatics alone leave the taſte of the bark very ſenſible in the mouth; but liquorice appeared to cover it effectually, whether in draughts or electaries, with the bark in ſubſtance or its preparations: to this compound any proper aromatic material may be ſuperadded, to give a grateful flavour. For liquid forms, an infuſion of the liquorice, and for electaries the extract ſhould be uſed: for making up the electaries, mucilages are more proper than ſyrups, as the former occaſion the compound to paſs down freely without ſticking about the mouth and fauces.

* PERUVIANUS CORTEX RUBER: Red Peruvian bark. In the year 1779, a Spaniſh ſhip from Lima was taken by an Engliſh frigate, and carried into Liſbon. Her cargo chiefly conſiſted of bark, part of which was afterwards brought to London, and purchaſed by ſeveral druggiſts. From its large coarſe appearance, it was ſome time before practitioners could be prevailed on to uſe it. At length, it was tried in ſome of the hoſpitals, and found to be ſo efficacious, that an opinion ſoon prevailed of its being of a much ſuperiour quality to the beſt common bark. Trials were multiplied throughout the kingdom, in a year when intermittents were remarkably frequent and obſtinate; and its reputation increaſed with every experiment. Chemical teſts were equally favourable to it,

as they proved it to contain a much greater proportion of active matter, than the other ſorts. At length, Dr. Saunders, a phyſician in London, eminent for chemical knowledge, publiſhed a treatiſe, in which various experiments on this bark were related, and atteſtations of its great medical efficacy from ſeveral practitioners were annexed. From this pamphlet, together with the editor's own experiments, the following account is extracted.

The *red bark,* as it is called, is in much larger and thicker pieces than the common. Moſt of the pieces are concave, though not rolled together, like the quilled bark. They break ſhort, like the beſt common bark; and appear evidently compoſed of three layers. The outer is thin, rugged, frequently covered with a moſſy ſubſtance, and of a reddiſh brown colour. The middle is thicker, more compact, and of a darker colour: it is very brittle and reſinous. The innermoſt layer is more woody and fibrous, and of a brighter red. In powdering this bark, the middle layer, which ſeems to contain the greateſt proportion of reſinous matter, does not break ſo readily as the reſt; a circumſtance to be attended to, leſt the moſt active part ſhould be left out of the fine powder.

This red bark to the taſte diſcovers all the peculiar flavour of the Peruvian bark, but much ſtronger than the common officinal ſort. An infuſion in cold water is intenſely bitter; more ſo than the ſtrongeſt decoction of common bark. Its aſtringency is in an equal degree greater than that of the infuſion of common bark, as is ſhewn by the addition of martial vitriol. The ſpirituous tincture of the red bark is alſo proportionally ſtronger than that of the pale. The quantity of matter extracted by rectified ſpirit from the powder of the former, was to that from the latter, as 3 to 2 in one experiment, and as 229 to 130 in another. And yet, on infuſing the two reſiduums of the firſt experiment in boiling water, that of the red bark gave a liquor conſiderably bitter, and which ſtruck a black with martial vitriol; while that yielded by the other was nearly taſteleſs, and void of aſtringency.

With reſpect to medical properties, from numerous and repeated trials it appears, that the red bark poſſeſſes the ſame virtues with the common, but in a much higher degree. A ſingle half ounce of this has radically cured an obſtinate intermittent, where many ounces of the other kind had either had no effect, or merely a temporary one.

Upon the whole, there is the ſtrongeſt reaſon to conclude, with Dr. Saunders, that the *red bark* is the true Peruvian bark, of the beſt quality, or in its higheſt perfection. It was probably the kind of bark firſt introduced into Europe, and which acquired ſo much reputation in the hands of Sydenham and Morton. It is the ſort ſtill preferred by the Spaniards for their own uſe; and they are ſurprized at our preference of an inferiour kind. Whether it be, as Dr. Saunders firſt imagined, the bark of the *trunk* of *full grown* trees, the *branches* or *young* trees of which yield the pale bark; or whether the trees be different *ſpecies*, or, at leaſt, *varieties*, does not ſeem accurately determined. The latter opinion is, perhaps, rendered the moſt probable, by an obſervation in the third edition of Dr. Saunders's pamphlet. He ſays, that "he has lately ſeen ſome exceeding good red bark imported by a Spaniſh merchant, a conſiderable part of which was as ſmall as the quilled bark in common uſe, yet ſtill preſerved its redneſs in that form, approaching, however, to the colour of cinnamon. It was extremely reſinous, and gave evident proofs of its being the *quill* of the larger red bark which was in the ſame cheſt." This idea ſeems to be confirmed by ſome curious remarks on the natural hiſtory of the cinchona, communicated by Dr. Simmons from the papers of the late M. Juſſieu, and ſubjoined to the ſame edition.

This writer makes ſeveral different ſpecies of bark, which may, however, be reduced to two. The firſt includes the *red*, the *yellow*, and the *knotty* barks, all of which have very ſmooth leaves, purpliſh flowers, with a bark that is bitter to the taſte, and more or leſs coloured. Of theſe, the *red* is held in the higheſt eſtimation, and was that firſt imported into Europe, but is now become exceeding ſcarce, ſo that its place has been ſupplied by the yellow and knotty kinds. The ſecond ſpecies includes the *white* barks, of which there are four varieties. All theſe have broad hairy leaves, and red, very odoriferous flowers, furniſhed with hairs on their inſide. In two of theſe varieties the inner layers of bark are of a reddiſh hue. Theſe have a ſlightly bitter taſte, and ſomewhat of a febrifuge quality, which, however, they ſoon loſe. The bark of the other two is quite white and inſipid.

There have been lately diſcovered in the province of Santa-Fe, four degrees and a half *north* of the equator, two kinds of cinchona, one of which appears to be the ſame with the *red* bark of Peru; the other, one of the *white* ſpecies. This is a fortunate diſcovery, as it points out a new ſtore of this moſt valuable medicine, when the ancient ones ſhall be exhauſted. We ſhall ſee in the next article, that our own ſettlements are not unprovided with a plant of the ſame genus, and ſimilar virtues.

* Cinchona carribæa *Linn.* *Cinchona Jamaicenſis D*^{ris}. *Wright, Phil. Tranſ.* Vol. LXXVII. Part II. This is a ſpecies of the jeſuit's bark, produced in Jamaica and the Carribee iſlands, of which an accurate deſcription, with an account of its virtues, has been publiſhed by Dr. Wright in the volume of Philoſophical Tranſactions above referred to; and ſome additions are made to this, in a letter from the ſame phyſician to Dr. Duncan. *Med. Comment.* Vol. V. p. 398.

This tree, called in Jamaica the *ſea-ſide beech*, grows to the height of from twenty to forty feet. The outer bark of the large trees is white, furrowed, and very thick. This is inert, and may be knocked off from the inner. This latter is of a dark brown colour. Its flavour is at firſt ſweet, with a mixture of the taſte of horſeradiſh and of the eaſtern aromatics; but when ſwallowed, it has that very bitterneſs and aſtringency which characterize the Peruvian bark. It yields its virtues both to cold and warm water; and a decoction of half an ounce of it boiled in a quart of water to the conſumption of a pint, proved as ſtrong as a decoction of an ounce and a half of the true bark. With the addition of orange peel it makes an elegant and grateful bitter tincture.

Its medicinal powers have been frequently tried by Dr. Wright, and it was found very efficacious in the dangerous remittent fevers of the Weſt Indies, and alſo in nervous fevers. It has been adminiſtered in London in an intermittent, and effected a cure as completely as the Peruvian bark. From theſe accounts, we may hope that it will prove an uſeful and efficacious ſubſtitute for the cinchona of Peru, if ever the ſupplies of this medicine ſhould fail.

PETASITES.

PETASITES Pharm. Edinb. (a) *Petaſites major & vulgaris C. B. Galerita & tuſſilago major quibuſdam. Tuſſilago Petaſites Linn.* Butterbur or Pestilentwort: a perennial plant, found wild by the

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(a) Expunged.

ſides of ditches and in meadows; producing early in the ſpring a thick naked roundiſh ſtalk, with a ſpike of ſmall naked purpliſh floſculous flowers on the top: the flowers and ſtalks ſoon wither, and are ſucceeded about May, by very large, roundiſh or ſomewhat heart-ſhaped leaves, ſtanding on long pedicles, ſomewhat hollowed in the middle ſo as to reſemble a bonnet *(petaſos)*: the root is long, thick, of a dark browniſh or black colour on the outſide, and white within.

THE roots of butterbur are recommended as aperient and alexipharmac; and promiſe, though now diſregarded in practice, to be of conſiderable activity. They have a ſtrong ſmell, and a bitteriſh acrid taſte, of the aromatic kind, but not agreeable, very durable and diffuſive, ſcarcely to be concealed, as Fuller obſerves, by a large admixture of other ſubſtances. Their virtue appears to reſide in a reſinous matter; which is diſtinguiſhable by the eye in the dried root, and which is readily extracted by ſpirit of wine.

PETROLEUM.

PETROLEUM, Oleum petræ, Oleum terræ. ROCK OIL: a fluid bitumen or mineral oil; exuding from the clefts of rocks or from the earth, or found floating on the ſurface of waters, in different parts of Europe, and more plentifully in the warmer countries; ſimilar, in its general properties, to the oils extracted by diſtillation from pitcoal, amber, and other ſolid bituminous bodies. The more fluid petrolea have been diſtinguiſhed by the name of *naphtha*; and the thicker by thoſe of *piſſaſphaltum* and *piſſelæum*.

1. PETROLEUM ALBUM. White petroleum: nearly colourleſs; almoſt as clear, fluid, and tranſparent, as water; of a ſtrong penetrating ſmell, not diſagreeable, ſomewhat reſembling that of rectified oil of amber. The principal, or only, part of Europe, in which it is found, is the dutchy of Modena in Italy.

2. PETROLÆUM FLAVUM *ſeu italicum Pharm. Pariſ.* Yellow petroleum: of a clear yellow colour; ſomewhat leſs fluid than the former; in ſmell rather leſs penetrating, leſs agreeable, and more nearly

allied to that of oil of amber. This alſo is found chiefly in the dutchy of Modena, and does not appear to differ very materially from the white ſort.

3. PETROLÆUM RUBRUM *ſeu gabianum, ſive Oleum gabianum Pharm. Pariſ.* Red petroleum: of a blackiſh red colour; of a thicker conſiſtence, and a leſs penetrating and more diſagreeable ſmell, than either of the foregoing; found in Italy, and about the village Gabian in Languedoc.

There are many variations of theſe oils in regard to colour, fluidity, ſubtility, and the pungency of their ſmell and taſte: the moſt fluid are in general the moſt ſubtile and pungent. Among us, the finer kinds are rarely to be met with; and even the inferiour ſorts are rarely unſophiſticated.

Fine petroleum catches fire on the approach of a flaming body, even without the contact of its ſubſtance with the flame; and burns entirely away. The haſty affuſion of concentrated mineral acids, which raiſes a violent ebullition with diſtilled vegetable oils, and generally ſets them on fire, makes no great conflict with petroleum: its conſiſtence becomes thicker by this admixture, and its ſmell more fragrant. By diſtillation, it loſes much of its natural ſcent, and becomes ſomewhat more pellucid than at firſt; a ſmall quantity of a browniſh or yellowiſh matter, ſimilar to amber *(a)*, remaining behind. Dropt on water, it ſpreads to a great diſtance, forming a various-coloured film on the ſurface. It floats alſo on rectified ſpirit of wine, and appears to be indiſſoluble in this menſtruum; but unites with the eſſential oils of vegetables *(b)*.

The finer petrolea, more agreeable than oil of amber, and more mild than that of turpentine, partake of the virtues of both. They have been ſometimes taken internally in nervous complaints and as a diuretic; but uſed chiefly as an external ſtimulant, againſt rheumatic pains, palſies, chilblains, &c. In theſe intentions, ſome mineral oils, procurable among ourſelves, are uſed by the common people, and often with benefit: the empyrical medicine, called Britiſh oil, is of the ſame nature with the petrolea; the genuine ſort being extracted by diſtillation from a hard bitumen, or a kind of ſtone-coal, found in Shropſhire and other parts of England.

(a) Borrichius, *Acta medica & philoſoph. Hafnienſia, tom.* i. *obſ.* 57.

(b) See *l'Hiſtoire & les memoires de l'acad. roy. des ſcienc. de Paris, pour les années* 1715 & 1726.

4. PETROLEUM BARBADENSE *Pharm. Lond. & Edinb. Bitumen barbadenſe. Piſſelæum indicum.* Barbadoes tar: of a reddiſh black colour, and a thick conſiſtence, approaching to that of treacle or common tar. It is found in ſeveral of our American iſlands, particularly, as is ſaid, in that from which it receives its name.

This bitumen, greatly eſteemed by the Americans as a ſudorific, in diſorders of the breaſt, and as an external diſcutient and antiparalytic, is in ſmell more diſagreeable, and both in ſmell and taſte leſs pungent, than the foregoing petrolea. It is likewiſe leſs inflammable, and leaves on being burnt a conſiderable quantity of aſhes. In diſtillation, it yields an oil different, in regard to its colour, from thoſe afforded by ſuch of the other bitumens as have been examined; appearing, when placed betwixt the eye and the light, of an orange colour, in other poſitions blue; but loſing this variability of aſpect in long keeping, and then looking in all ſituations yellow. This oil, and a balſam prepared by boiling the petroleum itſelf with one fourth its weight of flowers of ſulphur, are directed by the London college to be kept in the ſhops.

Ol. petrolei barbadenſis *Phar. Lond.*

Balſ. ſulph. barbadenſe *Phar. Lond.*

PETROSELINUM.

PETROSELINUM VULGARE Ph. Lond. Petroſelinum Ph. Edinb. Apium hortenſe ſeu petroſelinum vulgo C. B. Apium Petroſelinum, Linn. PARSLEY: an umbelliferous plant, with deep green winged leaves, of which thoſe that grow on the ſtalk are divided into fine oblong narrow ſegments: the ſeeds are ſmall; ſomewhat crookedly plano-convex, of a duſky greeniſh colour, with four yellow ridges along the convex ſide; the root long, whitiſh, about the thickneſs of the finger. It is biennial, a native of moiſt grounds in the ſouthern parts of Europe, and common in our culinary grounds.

THE roots of parſley are ſometimes uſed in apozems, and ſuppoſed to be aperient and diuretic, but liable to produce flatulencies. Their taſte is ſweetiſh, accompanied with a ſlight warmth or flavour, ſomewhat reſembling that of a carrot. Rectified ſpirit takes up, by digeſtion, all their active matter, and on inſpiſſating the tincture, leaves it entire in the extract; in which, the ſweetneſs is very conſiderable, the warmth very weak. Diſtilled with water, they impregnate the firſt runnings pretty ſtrongly with their flavour: when large quantities are diſtilled, there ſeparates a ſmall portion, two or three drams from two hundred pounds, of eſſential oil, which partly ſwims on the water, partly ſinks, and partly concretes about the noſe of the worm into a butyraceous matter.

The leaves of the plant have a greater warmth and leſs ſweetneſs than the roots. In diſtillation with water, they yield a greater quantity of eſſential oil, about ten drams from two hundred pounds, ſmelling agreeably of the herb, and in taſte moderately pungent.

The ſeeds, ſaid to be carminative, reſolvent, and diuretic, and commended in the German ephemerides for deſtroying cutaneous inſects in children, are in taſte warmer and more aromatic than any other part of the plant, and accompanied with a conſiderable bitterneſs. In diſtillation, three pounds yielded above an ounce of eſſential oil, great part of which ſunk in the watery fluid. They give out little by infuſion to watery menſtrua, but readily impart all their virtue to rectified ſpirit: the tincture loſes nothing conſiderable in being gently inſpiſſated to the conſiſtence of an extract, which proves a moderately warm, pungent, bitteriſh, not very grateful, aromatic.

PETROSELINUM MACEDONICUM.

PETROSELINUM MACEDONICUM Pharm. Lond. Apium macedonicum C. B. Apium petræum & petrapium quibuſdam. Bubon macedonicum Linn. MACEDONIAN PARSLEY: differing from the foregoing, in the upper and lower leaves being alike, the ſtalks hairy and much branched, the ſeeds dark coloured and covered with a rough hoarineſs. It is a native of ſtony ſoils in Macedonia, and cultivated in ſome of our gardens.

THE Macedonian parſley is ſimilar in quality to the common ſort, but weaker and leſs grateful. The ſeeds are the only part made uſe of, and theſe only as ingredients in the mithridate and theriaca: hence the Edinburgh college, having now dropt thoſe compoſitions, has dropt alſo the Macedonian parſley.

PEUCEDANUM.

PEUCEDANUM Pharm. Edinb.(a) *Peucedanum germanicum C. B. Pinaſtellum, fœniculum porcinum, fœniculum ſilveſtre, marathrum ſilveſtre, marathrophyllum, & cauda porcina quibuſdam. Peucedanum officinale Linn.* Hogs fennel, Horestrong, Sulphurwort: an umbelliferous plant, with large leaves divided and ſubdivided tripartitely into fine oblong narrow ſegments: the ſeed is ſomewhat oval, flattiſh, marked with three ſtriæ, and ſurrounded with a leafy margin: the root long and thick, with a tuft of filaments on the top, blackiſh on the outſide and pale coloured within. It is perennial, grows wild by the ſea ſhores and in moiſt ſhady grounds, and flowers in July.

The roots of ſulphurwort have a ſtrong fetid ſmell, ſomewhat reſembling that of ſulphureous ſolutions; and an unctuous, ſubacrid, bitteriſh taſte. Wounded when freſh, in the ſpring or autumn, particularly in the former ſeaſon, in which they are moſt vigorous, they yield a conſiderable quantity of yellow juice, which ſoon dries into a ſolid gummy-reſin, retaining the taſte and the ſtrong ſmell of the root. This gummy-reſin ſtands recommended as an aperient, and antihyſteric.

PILOSELLA.

PILOSELLA, Myoſotis, ſeu Auricula muris. Pharm. Pariſ. Piloſella major repens hirſuta C. B. Hieracium Piloſella Linn. Mouse-ear: a low creeping hairy plant; with oval leaves, in ſhape like thoſe of the daiſy, joined to the ſtalks without pedicles, green above and white underneath: the flowers, which ſtand ſolitary on upright naked ſtalks, are compoſed of a number of yellow floſcules, ſet in ſcaly cups, and followed by ſmall black ſeeds, winged with down. It is perennial, grows wild in dry paſture grounds, and flowers in June and July.

Pilosella is one of the bitteriſh lacteſcent plants. Its leaves differ from thoſe of dandelion, cichory, and the other herbs of that claſs, in being much leſs juicy, leſs bitter, accompanied with ſome aſtringency which ſeems to prevail above the bitter, and a ſlight ſweetiſhneſs very durable in the mouth: in the extracts made from them, both by water and ſpirit, the aſtringency is more manifeſtly the prevailing principle, though even when thus concentrated it is not very ſtrong. The roots are conſiderably bitterer than the leaves, and leſs, if at all, aſtringent.

(a) Expunged.

PIMPINELLA.

PIMPINELLA SAXIFRAGA Pharm. Lond. & Edinb. & Linn. BURNET-SAXIFRAGE: a perennial umbelliferous plant; with naked umbels; the outermoſt flowers compoſed of unequal petals, the inner equal; the ſeeds ſmall, oblong, ſomewhat pointed, flat on one ſide, convex and ſtriated on the other; the lower leaves roundiſh, indented, ſet in pairs along a middle rib with an odd one at the end; the upper leaves oblong and very narrow; the roots long, ſlender, and whitiſh.

1. PIMPINELLA ALBA *Germanorum: Pimpinella ſaxifraga major umbella candida C. B.* Greater or white burnet-ſaxifrage: with ſome of the leaves pretty deeply cut, the odd one into three ſections. It is not very common in this country, and therefore our markets have been generally ſupplied with the following.

2. PIMPINELLA SAXIFRAGA: *Pimpinella ſaxifraga minor foliis ſanguiſorbæ Raii; Tragoſelinum alterum majus Tourn.* Smaller burnet-ſaxifrage; with uncut leaves. It grows wild in dry paſture grounds.

3. PIMPINELLA SAXIFRAGA MINOR *C. B. Tragoſelinum minus Tourn.* Small burnet-ſaxifrage; with the upper leaves divided into oblong narrow ſegments; taller than the others, but with ſmaller leaves. This is the moſt common ſort in the fields about London.

ALL theſe plants appear to be poſſeſſed of the ſame qualities, and to differ little otherwiſe than in external appearance: and even in this, their difference is ſo inconſiderable and inconſtant, that Linnæus has joined them into one ſpecies, under the name of *pimpinella foliis pinnatis, foliolis radicalibus ſubrotundis, ſummis linearibus:* he ſays he has ſeen the ſecond ſort produced from the ſeeds of the firſt ſown in a richer ſoil. Inſtead of the firſt, which has been generally underſtood as the officinal kind, our college allows either of the others to be taken indifferently.

The roots of pimpinella have a hot, pungent, not very durable taſte; and emit, when freſh, an acrid halitus, of no particular ſmell, but affecting the eyes like that of horſeradiſh or muſtard ſeed, though in a lower degree. In drying, they loſe this ſubtile matter, and in long keeping the pungency of their taſte is diminiſhed. Their virtue is extracted, partially by water, and completely by rectified ſpirit. In diſtillation with water, a part of their pungency ariſes and impregnates the diſtilled fiuid, and a part remains behind in the decoction: when large quantities are diſtilled, there ſeparates from the water a ſmall portion of a yellowiſh eſſential oil extremely acrid and fiery. On inſpiſſating the ſpirituous tincture, little or nothing of the virtue of the pimpinella riſes with the ſpirit: the remaining extract, ſmall in quantity, is of great pungency and heat. The leaves and ſeeds of the plant have likewiſe a conſiderable acrimony; the leaves leſs than the ſeeds, and both leſs than the roots.

This pungent root is in great eſteem among the Germans, as a warm ſtimulating reſolvent, aperient, diaphoretic, *&c.* in weakneſs of the ſtomach from viſcid phlegm, infarctions of the breaſt, tumours and obſtructions of the glands, impurities of the blood, and in general wherever tenacious humours are to be attenuated, or the fluid ſecretions promoted. It is an uſeful ingredient in our officinal compound arum powder, ſupplying in good meaſure the pungency which the arum root loſes in being reduced into that form. It is employed alſo as a maſticatory for ſtimulating the ſalival glands; and in gargariſms for diſſolving viſcid mucus in the fauces.

PINGUEDO.

PINGUEDO ſive adeps: Sevum ovillum & hircinum, Axungia porcina & viperina. ANIMAL FATS: ſheeps ſuet, goats ſuet, hog's lard, and vipers fat.

THE medical uſe of theſe ſubſtances is wholly external, as the baſis of ointments and other unctuous applications. In their effects, they do not ſeem to differ materially from one another; all of them having one common emollient virtue, ſuppling and relaxing the part to which they are applied, and obſtructing its perſpiration. The principal difference to be conſidered in them is that of their conſiſtence, by which they are adapted to different forms, or for receiving different admixtures; the ſolid *ſeva* ſerving to give the thick conſiſtence of an unguent to oils and the more fluid reſinous juices, while the ſofter *axungiæ* procure a like conſiſtence to ſolid reſins and powders. The fat of the viper is commonly preferred to the others in affections of the eyes; but its ſuperiority, in theſe caſes, to other ſoft fats, does not appear to have been ſufficiently determined by experience. Nor indeed does it appear, that animal fats, and flavourleſs vegetable oils, of ſimilar conſiſtences, are materially different, reſpectively, from one another, in their effects when uſed in external applications. Even in regard to qualities, more remote than thoſe, by which they can act when applied to the external parts of the body, the difference between the vegetable and animal fats is, perhaps, leſs than might be expected, and apparently leſs than that which is obſerved between the other correſponding ſubſtances of the two kingdoms, as the gelatinous matters of the one and the gummy of the other: animal fats, in their reſolution by fire, yield neither the peculiar ſtench, nor the volatile alkaline ſalt, which ſubſtances completely animalized afford.

Axungiæ porcinæ ſevique ovilli curatio *P.L.*

Axungiæ viperinæ curatio *Ph. Lond.*

Lard and ſuet are directed to be tried or purified, by chopping them into ſmall pieces; melting them by a gentle heat, with the addition of a little water, which ſecures them from any danger of burning or turning black, this fluid not being ſuſceptible of a degree of heat ſufficient for that effect; and then ſtraining them from the membranes. Vipers fat, ſeparated from the heart, liver, and other bloody parts, is ordered to be melted without addition, and then ſtrained through a linen cloth; the quantity of this fat, uſually purified at a time, being ſo ſmall, that the heat may be eaſily regulated, ſo as to prevent burning, without water.

Unguentum ſimplex *P.L.*

Tried lard is formed into an elegant ointment, commonly called pomatum, by beating it with roſewater, in the proportion of three ounces of the water to two pounds of the lard, till they are well mixed; then melting it over a very gentle fire, and after ſtanding for a little while, that the watery part may ſettle, pouring off the lard, and inceſſantly ſtirring and beating it about till it grows cold, ſo as to reduce it into a light yielding maſs; and afterwards adding ſo much eſſence of lemons as will be ſufficient to give a grateful ſmell. Some ſcent it with oil of rhodium;

and previouſly digeſt the lard for ten days with common water, renewing the water every day, a proceſs which does not appear to be of much uſe. Theſe ointments may be tinged of a fine red colour, for lip-ſalves, by a proper addition of alkanet root: the faculty of Paris directs, for this purpoſe, twenty-four parts of the white pomatum, eight of oxes marrow, and eight of white wax cut in ſmall pieces, to be melted together by the heat of a water-bath; one part of powdered alkanet root to be added; the mixture ſtirred at times till it appears tinged of a deep red colour, and then ſtrained through a linen cloth.

Pomatum rubrum *Ph. Pariſ.*

Animal fats are not diſſoluble by ſpirit of wine any more than by water: when ſcented with eſſential oils, the oil may be totally extracted by digeſtion in rectified ſpirit, ſo as to leave the fat inodorous. By the ſame menſtruum, fats may be freed from their ill ſmell, and even thoſe that have grown conſiderably rancid by keeping may be made ſweet again as at firſt; the rancidity and ſmell ſeeming to conſiſt in a part of the fat attenuated, or ſubtilized, into a ſtate analogous to that of the oil into which fats are reſolved by diſtillation, which oil is totally diſſoluble in ſpirit.

PINGUICULA.

PINGUICULA: Sanicula montana flore calcari donato C. B. *Pinguicula ſive ſanicula eboracenſis* Gerard. *Viola paluſtris, liparis, cucullata, & dodecatheon plinii quibuſdam. Pinguicula vulgaris* Linn. BUTTERWORT or YORKSHIRE SANICLE: a ſmall plant, with a few, oblong, obtuſe, uncut, pale, gloſſy, unctuous leaves, lying on the ground; among which riſe naked pedicles, bearing, each, a purpliſh monopetalous flower divided into two lips (of which the upper is cut like a heart, the lower into three ſections) with a ſlender cylindrical ſpur or tail at bottom: the flower is followed by a roundiſh capſule full of ſmall ſeeds. It is perennial, grows wild in elevated marſhy grounds, and flowers in the ſpring.

THE remarkable unctuoſity of this plant, and of ſome others of the ſame genus, ſeems to entitle them to a further examination than has yet been beſtowed upon them *(a)*. It is ſaid, that the unctuous and glutinous

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(a) Linnæus, *Flora lapponica, p.* 10.

juice of the *pinguicula* is uſed in ſome places as a liniment for chaps *(a)*, and as a pomatum for the hair *(b)*: that new milk, poured upon the freſh leaves, on a ſtrainer, and after quick colàture, ſet by for a day or two, becomes thick, tenacious, very agreeable and ſalubrious, and throws off no whey unleſs long kept; and that a little of the milk, ſo thickened, ſerves for bringing freſh milk to the ſame ſtate *(c)*: that a ſyrup made from the juice, and decoctions of the leaves in broth, are uſed among the common people in Wales as cathartics: and that the herb is hurtful to cattle that feed upon it *(d)*.

PIPER.

PEPPER: the ſmall, round, aromatic fruit of a trailing plant growing in Sumatra, Java, and Malabar, *(Piper nigrum Linn.)* The pepper-corns adhere in cluſters to the ſtalks, without pedicles: when ripe, they are firm, not juicy, of a red colour, which changes in drying to a black.

1. Piper nigrum *Pharm. Lond. & Edinb. Melanopiper.* Common or black pepper: the fruit gathered, probably, before perfect maturity, and dried in the ſun.

2. Piper album *Pharm. Lond. Leucopiper.* White pepper: the ripe fruit decorticated by maceration in water. Some of the grains, as brought to us, have pieces of a dark-coloured ſkin ſtill upon them.

Of theſe pungent hot ſpices, the black ſort is the hotteſt and ſtrongeſt, and moſt commonly made uſe of for medicinal as well as culinary purpoſes. They both ſeem to heat the conſtitution more than ſome other ſpices that are of equal pungency upon the palate; and from thoſe ſpices they differ in this, that their pungency does not reſide in the volatile parts or eſſential oil, but in a ſubſtance of a more fixt kind, which does not riſe in the heat of boiling water.

Pepper, infuſed in water, impregnates the menſtruum pretty ſtrongly with its flavour, but weakly with its taſte: by boiling for ſome time,

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(a) Simon Paulli, *Quadripartit. botanic.*

(b) Ray, *Hiſtoria plantarum*, i. 752.

(c) Giſsler, *Suenſka vetenſkaps academiens handl.* 1749.

(d) Gerard, *Herbal emaculated, p.* 789.

a little more of its pungent matter is extracted, and its flavour diſſipated. On collecting the fluid that exhales in the boiling, the water is found agreeably impregnated with the odour of the ſpice, but ſcarcely diſcovers any taſte: the eſſential oil, which riſes to the ſurface of the water, thin, light, and limpid, in ſmell ſtrong and agreeable, is in taſte mild; a drop or two impreſſing on the tongue only a moderate grateful warmth. On inſpiſſating the decoction, a part of the pungency of the pepper is found in the mucilaginous extract, and a part is retained by the pepper itſelf *(a).

Rectified ſpirit extracts completely the active matter of the pepper. The tincture is extremely hot and fiery, a few drops ſetting the mouth as it were in a flame: inſpiſſated, it leaves an extract ſtill more fiery; the ſpirit carrying off in its exhalation a little of the flavour, but nothing of the heat or pungency of the ſpice. The quantity of extract is nearly the ſame from both kinds of pepper; the ſpirituous amounting to about one eighth, and the watery to near one half their weight: but thoſe of the white, like the ſpice in ſubſtance, are weaker than thoſe of the black ſort.

PIPER LONGUM.

PIPER LONGUM Ph. Lond. & Edinb. Macropiper Ph. Pariſ. Piper longum orientale C. B. LONG PEPPER: the fruit of an Eaſt Indian plant of the ſame genus with that which produces the black pepper, *(Piper longum Linn.)*; of a cylindrical figure, about an inch and a half in length, having numerous minute grains diſpoſed round it in a kind of ſpiral direction.

THIS ſpice is hotter and more pungent than either of the preceding kinds, and its ſpirituous extract is proportionably more fiery. In pharmaceutic properties, it entirely agrees with them; its active matter being only partially diſſoluble in watery menſtrua, and its pungency not riſing in the heat of boiling water. Decoctions of it are very mucilaginous, rather more ſo than thoſe of the black or white.

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*(a) The acrid matter of pepper is ſo ſtrongly retained, that a quantity boiled ſucceſſively in freſh parcels of water, had not loſt all its taſte till the forty-third boiling. *Gaubii Adverſar.*

PIPER JAMAICENSE.

PIPER JAMAICENSE Pharm. Lond. Pimenta ſive piper jamaicenſe Pharm. Edinb. Amomum Pharm. Wirtemb. JAMAICA PEPPER, PIMENTO, ALL-SPICE: the dried aromatic berry of a large tree growing in the mountainous parts of Jamaica, reckoned a ſpecies of myrtle, and called by Sir Hans Sloane *myrtus arborea aromatica foliis laurinis*, by Linnæus *myrtus (pimenta) foliis alternis*.

PIMENTO is a moderately warm ſpice, of an agreeable flavour, ſomewhat reſembling that of a mixture of cloves, cinnamon, and nutmegs. Diſtilled with water, it yields an elegant eſſential oil, ſo ponderous as to ſink in the aqueous fluid, in taſte moderately pungent, in ſmell and flavour approaching to oil of cloves, or rather a mixture of thoſe of cloves and nutmegs: the remaining decoction, inſpiſſated, leaves an extract ſomewhat ungrateful but not pungent, and the berry itſelf is now found to be almoſt wholly deprived of its taſte as well as flavour; the warmth of this ſpice reſiding rather in the volatile than in the fixt parts. To rectified ſpirit it imparts, by maceration or digeſtion, the whole of its virtue, together with a browniſh green tincture: in diſtillation, it gives over nothing conſiderable to this menſtruum, nearly all its active matter remaining concentrated in the inſpiſſated extract; which is very warm and pungent, but not of a fiery heat like thoſe obtained from the foregoing ſorts of pepper.

This ſpice, at firſt brought over for dietetic uſes, has been long employed in the ſhops as a ſuccedaneum to the more coſtly oriental aromatics: from them it was introduced into our hoſpitals, and is now received both in the London and Edinburgh pharmacopœias. A ſimple water is directed to be diſtilled from it, in the proportion of a gallon or ten pounds from half a pound: this is ſtrongly impregnated with the flavour of the pimento, though it is leſs elegant than the ſpirituous water which the ſhops have been accuſtomed to prepare, by drawing off two or three gallons of proof ſpirit from the ſame quantity of the ſpice. The Edinburgh college directs only nine pounds from this quantity. The eſſential oil does not ſeem to be much known in practice; though it promiſes to be a very uſeful one, and might, doubtleſs, on many occaſions, ſupply the place of many of the dearer oils. The quantity

Aq. piperis jamaicenſis *Phar. Lond. Phar. Edinb.*

Aq. piper. jamaic. ſpirit. *Ph. Edin.*

Ol. eſſent. pip. jamaic. *Phar. Edinb.*

of oil afforded by the ſpice is very conſiderable: Cartheuſer indeed ſays, that only about half a dram is to be got from ſixteen ounces; a miſtake, which probably has ariſen from inadvertence in copying Neumann's proportion, of half a dram from an ounce, or one ſixteenth: ſo large a proportion as this laſt cannot, however, be collected in its proper form, the oil that remains diſſolved in the diſtilled water being here included.

PIPER INDICUM.

PIPER INDICUM Pharm. Edinb. Capſicum Pharm. Pariſ. Piper indicum, brazilianum, guineenſe, calecuticum, hiſpanicum, & luſitanicum, quibuſdam. Capſicum ſiliquis longis propendentibus Tourn. Siliquaſtrum plinii J. Bauh. Capſicum annuum Linn. CAPSICUM or GUINEA PEPPER: long, roundiſh, taper, bright red pods, divided into two or three cells full of ſmall whitiſh ſeeds: the fruit of an annual plant, with ſquare ſtalks, oblong acuminated leaves, and white flowers growing in their boſoms divided into five ſegments in form of a ſtar; a native of the Eaſt and Weſt Indies, and raiſed in ſome of our gardens.

THIS fruit, when freſh, diſcovers to the organs of ſmell, a penetrating acrid halitus, which in drying is diſſipated: its taſte, whether freſh or dry, is extremely pungent and acrimonious, ſetting the mouth as it were on fire, and producing a painful burning vellication of long continuance, like that occaſioned by arum root, but more of the warm aromatic kind. It gives out its pungency to rectified ſpirit, together with a pale yellowiſh red tincture: the ſpirit, gently diſtilled off, has no conſiderable impregnation from the capſicum: the remaining extract is inſupportably fiery.

Capſicum is ſometimes given, in minute quantities, as one of the higheſt ſtimulants, in cold ſluggiſh phlegmatic temperaments, in ſome paralytic caſes, in relaxations and inſenſibility of the ſtomach, and for promoting the efficacy of aloetic medicines and the deobſtruent gums in uterine diſorders. It is uſed principally at table: a ſpecies of it, called in the Weſt Indies bird-pepper, is the baſis of the powder brought from thence under the name of Cayenne pepper. It is obſervable that this fruit, perhaps the ſtrongeſt of the aromatic ſtimulants, is uſed freely, as is ſaid, by the natives even of the warm climates: poſſibly theſe pungent antiſeptic kinds of ſubſtances may there be more ſalubrious than they are, in general, among us, as they ſeem qualified to reſiſt or correct the putredinous colliquation of the humours which immoderate heat produces.

PIX.

PIX LIQUIDA Pharm. Lond. & Edinb. TAR: a thick, black, reſinous, very adheſive juice; melted out by fire from old pines and fir-trees. The trees, cut in pieces, are incloſed in a large oven, which being heated by a fire on the outſide, or the wood itſelf kindled and ſmothered, the juice runs off by a canal at the bottom.

TAR differs from the turpentine or native reſinous juice of the trees, in having received a diſagreeable empyreumatic impreſſion from the fire; and in containing, along with the pungent bitter terebinthinate matter, a portion of the acid which is extricated from the wood by the heat, and likewiſe of its gummy or mucilaginous matter. By the mediation of theſe principles, a part of the terebinthinate oil and reſin becomes diſſoluble in watery liquors, which extract little or nothing from the purer turpentines.

Water impregnated with the more ſoluble parts of tar has been recommended as a remedy for almoſt all diſeaſes. The proportions that have been commonly followed are, two pounds of tar to a gallon of water; which are to be well ſtirred together, then ſuffered to ſettle for two days, and the clear liquor poured off for uſe. It is obſerved, that "tar-water, when right, is not paler than French, nor deeper coloured "than Spaniſh white wine, and full as clear: if there be not a ſpirit "very ſenſibly perceived in drinking, the tar-water is not good. It "may be drank either cold or warm. As to the quantity, in common "chronical indiſpoſitions a pint a day may ſuffice, taken on an empty "ſtomach, at two or four times: more may be taken by ſtrong "ſtomachs. But thoſe who labour under great and inveterate maladies, "muſt drink a greater quantity, at leaſt a quart every twenty-four "hours. In acute diſeaſes, it muſt be drank in bed warm, and in great "quantity (the fever ſtill enabling the patient to drink) perhaps a pint

" every hour." Though this medicine is undoubtedly very far inferiour to the character that has been given of it, it is apparently capable of anſwering important purpoſes, as a deobſtruent balſamic ſolution, moderately warm and ſtimulating. It ſenſibly raiſes the pulſe, and increaſes either perſpiration or the groſſer evacuations. I have been informed of ſome late inſtances of its good effects in diſorders of the leprous kind.

Some have imagined the acid to be the principle that gives virtue to tar-water; and hence have endeavoured to introduce, inſtead of the infuſion, an acid ſpirit extracted from tar by diſtillation. But the effects of this, as of other acids, are oppoſite to thoſe experienced from tar-water; nor does the acid of tar differ from that which is extricated by fire from all kinds of recent wood. Tar-water, diſtilled, yields a liquor very conſiderably impregnated with its flavour, though more grateful than the infuſion itſelf both in ſmell and taſte: there remains a light, ſpongy, blackiſh ſubſtance, not acid but bitter, partially diſſoluble again in water.

Pil. piceæ *Noſocom. Ed.*

Unguent. e pice † *Ph. L.*

‡ *Phar. Edin.*

This juice is ſometimes given alſo in ſubſtance, mixed with ſo much powdered liquorice, or other like powdery matters, as is ſufficient to render it of a due conſiſtence for being formed into pills. An ointment, made by melting it with an equal weight of mutton ſuet, and ſtraining the mixture whilſt hot †, or by melting together five parts of tar and two of yellow wax ‡, is ſometimes uſed as a digeſtive, and ſaid to be particularly ſerviceable againſt ſcorbutic and other cutaneous eruptions.

On inſpiſſating tar, or boiling it down to dryneſs without addition, it gives over an acid liquor in conſiderable quantity, and an ethereal oil of the ſame general nature with that of turpentine, but impregnated with the empyreumatic flavour of the tar. The ſolid reſiduum is the common pitch, *pix arida Ph. Lond. Pix ſicca, palimpiſſa dioſcoridi C. B.* This is leſs pungent, and leſs bitter than the liquid tar, and uſed only in ſome external applications, as a warm adheſive reſinous ſubſtance. Neumann obſerves, that when melted with oils, reſins, and fats, into ointments and plaſters, the pitch is greatly diſpoſed to ſeparate and precipitate.

PLANTAGO.

PLANTANE: a ſmall perennial herb, common in fields and by road ſides; with the leaves lying on the ground; and naked unbranched ſtalks, bearing on the top a ſpike of ſmall imperfect four-leaved flowers, followed by little capſules, which, opening horizontally, ſhed numerous crooked ſeeds.

1. PLANTAGO *Pharm. Edinb. Plantago latifolia ſinuata C. B. Plantago ſeptinervia. Plantago major Linn.* Common greater plantane: with oval leaves, having ſeven ribs, prominent on the lower ſide, running from end to end; and long ſlender ſpikes.

2. PLANTAGO MINOR *ſeu quinquenervia: Plantago major anguſtifolia C. B. Plantago lanceolata J. B. Plantago lanceolata Linn.* Narrow-leaved plantane or ribwort: with oblong, five-ribbed leaves; and ſhort thick ſpikes.

THE leaves and ſeeds of plantane, recommended as vulneraries, in phthiſical complaints, ſpittings of blood, alvine fluxes, *&c.* appear to be of the milder kind of reſtringents or corroborants. The leaves, of no remarkable ſmell, are in taſte ſlightly acerb: their expreſſed juice, depurated by ſettling and colature, or clarified with white of eggs, and inſpiſſated to the conſiſtence of honey, diſcovers a conſiderable ſaline auſterity. The two ſorts are not ſenſibly different in quality from one another, though the firſt has been generally directed for medicinal uſe in preference to the other. The leaves are, in ſome places, the uſual application made by the common people to ſlight wounds.

PLUMBUM.

PLUMBUM Pharm. Lond. LEAD: a pale, livid, ſoft, very flexible metal: above eleven times ſpecifically heavier than water; fuſible in a ſmall heat, ſomewhat leſs than that in which expreſſed oils begin to boil. Continued in fuſion it contracts a various-coloured pellicle on the ſurface, and if kept ſtirring, ſo as that freſh ſurfaces may be expoſed to the air, it changes by degrees into a powdery duſky-coloured calx:

calx : this powder, calcined for ſome time in a ſtronger fire, in ſuch a manner that the flame may reverberate all over it, becomes firſt yellow, and afterwards of a deep red colour †: all theſe calces, if the fire be haſtily raiſed to a conſiderable degree, melt into the appearance of oil, and on cooling form a ſoft flaky pulverable ſubſtance called litharge ‡, of a pale yellowiſh or reddiſh colour, according as the lead has been leſs or more calcined : if the calces be urged with a pretty ſtrong fire, they run into a yellowiſh glaſs, which, while in fuſion, powerfully diſſolves moſt kinds of earthy bodies, and corrodes the common crucibles till it has ſaturated itſelf with their earth.

† Minium *Pharm. Lond.*

‡ Lithargyrus *P. L. & E.*

The ores of lead, in colour commonly reſembling lead itſelf, and of a cubical or parallelopipedal ſtructure, are plentiful in England and other parts of the world. The metal, extracted from the ore by fuſion, contains frequently a portion of ſilver, and ſometimes of gold : on keeping the compound melted in a due degree of heat, the lead calcines and turns to litharge, which is raked or blown off till the noble metals remain pure ; all the other common metallic bodies being ſcorified and carried off by the lead. From the works, wherein ſilver is thus extracted from lead in the large way, the ſhops are ſupplied with litharge ; which, when pale coloured, is called litharge of ſilver ; when high coloured, litharge of gold. The latter is to be preferred, not as containing any of the metal by whoſe name it is diſtinguiſhed, but as being more thoroughly calcined than the pale ſort : the pale may be freed from the uncalcined lead it holds, by melting it ; the uncalcined part falling to the bottom during the fuſion.

The nitrous acid, diluted with about an equal quantity of water, diſſolves lead pretty readily into a gold-coloured liquor : by the vitriolic and marine acids it is very difficultly acted on ; and when previouſly diſſolved in the nitrous, it is by either of theſe precipitated. Vegetable acids, digeſted on lead in ſubſtance, diſſolve it exceeding ſparingly : by certain managements they may be made to act more vigorouſly, and to ſatiate themſelves with the metal.

Thin plates of lead, ſuſpended over vinegar in a proper veſſel, and ſet to digeſt in a gentle heat, as that of horſedung, that the acid vapour may riſe and circulate round the plates, are found, in about twenty days, covered with a white powdery or flaky matter : this being ſcraped off, and the proceſs repeated, the whole of the metal is thus corroded by degrees

Ceruſſa *Ph. Lon. & Edin.*

degrees into ceruſſe or white lead. This commodity, the preparation of which makes a conſiderable trade, is frequently adulterated with a mixture of whiting: the entire flaky maſſes, called flake lead, ſhould be choſen, as not being liable to abuſe. The adulteration may be diſcovered by means of vinegar, which will efferveſce with and diſſolve the whiting or calcareous earth: the liquor being then poured off clear, or filtered, the addition of a little ſpirit of ſalt will precipitate ſuch part of the lead as the vinegar may have taken up; after which the calcareous earth will manifeſt itſelf on adding a little vitriolic acid.

The calces of lead are much eaſier of ſolution in vegetable acids than lead in its metallic form. On digeſting four ounces of litharge about three days in a ſand heat with a pint of ſtrong vinegar, and now and then ſhaking the veſſel; the liquor, filtered, is found to have received a ſtrong impregnation from the litharge, and to have diſſolved about one tenth of it, whereas, of the ſame quantity of lead in ſubſtance, ſcarcely one hundredth part would be diſſolved. Lead even in its vitreous ſtate, or in the glazing of the common earthen-ware veſſels, is conſiderably acted on by vegetable acids; which, by being boiled in thoſe veſſels, receive from them the peculiar taſte, and pernicious qualities of ſaturnine ſolutions.—Lead may be diſcovered in acid liquors by a reddiſh, brown, or blackiſh colour being produced in them on adding a few drops of a ſolution of orpiment or common ſulphur made in lime-water, and by the colour not being deſtroyed on the ſuperaddition of a little ſpirit of ſalt (a): other metals, diſſolved in vegetable acids, produce, as well as lead, a dark colour with the ſulphureous ſolutions, but ſpirit of ſalt rediſſolves them, and totally diſcharges the colour.

Acetum lithargyrites.

Of all the ſaturnine calces, the ceruſſe, on account of the corroſion it has previouſly undergone from the ſteam of vinegar, is the moſt eaſily diſſoluble in freſh vinegar, and hence is made choice of where a ſaturated ſolution is required. The ſolution made in vinegar, inſpiſſated to the conſiſtence of honey and ſet in the cold, ſhoots by proper management into cryſtals, called, from their taſte, *ſugar* of lead. All the ſolutions, and ſoluble preparations of this metal, have a remarkably ſweet taſte, mixed with a conſiderable auſterity.

Saccharum ſaturni *P. L.*

Sal plumbi *vulgo* ſacch. ſaturni *P. E.*

(a) The browniſh or reddiſh colour produced by alkalies in cyder impregnated with lead, is totally diſcharged by ſpirit of ſalt. *M. S. of Dr. Lewis.*

Lead in its metallic form, or when calcined by fire, does not appear to have any medicinal operation: diſſolved or rendered ſoluble by acids, it is one of the moſt powerful ſtyptics, but at the ſame time, for internal uſes, one of the moſt dangerous. A few grains of the ſugar have been ventured on for checking obſtinate hemorrhagies and other profuſe evacuations: a tincture drawn with rectified ſpirit, by maceration without heat, from ſugar of lead and green vitriol, in the proportion of two ounces of each of the ſalts reduced ſeparately into powder †, or three ounces of the ſugar and two of the vitriol ‡, to a quart of ſpirit, has been given from fifteen to thirty drops, for reſtraining the colliquative ſweats attending phthiſes and hectic fevers. This practice has in ſome inſtances been ſucceſsful, but the hazard is very great: all the ſaturnine preparations that have any activity are in a peculiar manner injurious to the nervous ſyſtem, and ought never to be ventured on but in deſperate caſes as a laſt reſource. Obſtinate conſtipations, violent colics, pains and contractions of the limbs, tremors and reſolutions of the nerves, and ſlow waſting fevers, are the general conſequences of ſaturnines taken in any conſiderable quantities internally, and of the fumes to which the workmen are expoſed in the fuſion of the metal in the way of buſineſs *(a)*.

† Tinct. ſaturnina *P.L.*
‡ Tinct. ſaturnina *vulgo* antiphthiſica *Phar. Edinb.*

Externally, this metal and its preparations are of ſufficient ſafety and of great utility. The plaſter, in general uſe for ſlight cutaneous injuries, and which makes the baſis of ſeveral other plaſters, is a ſolution of litharge in oil olive, in the proportion of five pounds of the litharge, ſubtilely powdered, to eight pints † or ten pounds ‡ of the oil. The union is effected by boiling them together over a gentle fire, with the addition of about a quart of water to prevent their burning, and keeping them continually ſtirring, till they incorporate and acquire a due conſiſtence: if all the water ſhould be conſumed before this happens, ſome more water, previouſly made hot, is added. A red plaſter is prepared in the ſame manner with minium inſtead of litharge, but as it does not ſtick ſo well as the other, it is more rarely uſed: it is likewiſe more difficult of preparation, the compound being very apt, though a conſiderable quantity of water be uſed, to burn and grow black in the boiling.

Empl. commune † *P.L.*
‡ *Ph. Edinb.*

Emp e minio *Pharm. Lond.*

(a) Vide Hoffman, *Philoſophia corp. human. morboſi, P.* II. *cap.* viii. §. 20. *& ſeq.* Hundertmark, *Acta acad. cæſareæ nat. curioſ. vol.* vii. *Append. p.* 96.

The ceruſſe and ſugar, particularly the latter, are cooling, drying, and aſtrictive: the ſugar is uſed in collyria for inflammations and defluxions of the eyes, and in injections for reſtraining ſimple gonorrhœas; and both preparations in unguents and liniments, againſt cutaneous heats and excoriations, ſlight ſerpiginous eruptions, and for anointing the lips of wounds or ulcers that itch much or tend to inflammation. Compoſitions for theſe purpoſes are made in the ſhops, by mixing one part of ceruſſe with five of the ſimple ointment made with oil and wax; by grinding two ounces of litharge, and adding, alternately and by little and little, two ounces of vinegar and ſix of oil [†]; or by boiling and ſtirring, over a gentle fire, four ounces of the common plaſter, with one of vinegar, and two of oil where a thick unguent is required [‡], or four of oil for a ſofter liniment [||]: this laſt is a leſs troubleſome method of uniting the litharge with the oil and vinegar, than trituration; and the compoſition proves likewiſe more ſmooth and uniform, and leſs liable to grow hard in keeping *(a). But the moſt elegant and effectual of all the saturnine unguents, are thoſe made with the ſugar; in the proportion of half an ounce [§] to a pint of oil and three ounces of white wax; or one part, to twenty parts of the ſimple oil and wax ointment [§§] *(b).

Ung. e ceruſſa, *vulgo* album *P. E.*

[†] Ung. nutritum.

[‡] Ung. tripharmacum *Pharm. Lond.*

[||] Lin. tripharmacum *Pharm. Lond.*

Ung. ſaturni. [§] *Ph. Lon.*

[§§] *Ph. Edin.*

* Mr. Goulard, a ſurgeon of Montpellier, has been the means of greatly extending for ~~ſome~~ years paſt the external uſe of lead. The baſis of his preparations is what he calls the *extract of lead*, or a ſolution of litharge in ſtrong vinegar, boiled down to almoſt a ſyrupy conſiſtence. This, diluted in a large quantity of ſoft water, makes his *vegeto-mineral water*, which is employed as a lotion or fotus, or boiled with bread to make a cataplaſm. The extract is likewiſe combined with unguentous matters into a variety of forms. Theſe preparations have, in fact, been found of the greateſt utility in various caſes of inflammation, particularly of the eryſipelatous kind, and the conſequences of burns and ſcalds. Their moſt liberal application has not, in the opinion of moſt practitioners, been obſerved to produce any of thoſe affections of the nervous ſyſtem, which characterize the poiſonous effects of lead taken internally. At the

*(a) The *ung. nutritum*, made without heat, though now expunged from our diſpenſatories, is much the beſt of the above preparations, and a very excellent application in many caſes. It ſhould not be long kept, but made freſh as wanted.

*(b) Theſe are by no means the efficacious preparations here repreſented. The oil and wax ſo cover the metallic ſalt, that its action is prevented; or, if it acts at all, it proves highly ſtimulating from the *undiſſolved* ſtate in which it is applied.

ſame time, the abuſe of ſaturnine applications, on the ground of thoſe falſe and inconſiſtent ideas of their action which Mr. Goulard has ſupported, has not infrequently been attended with diſagreeable conſequences.

POLIUM.

POLIUM Pharm. Lond. Poley-mountain: a ſmall ſhrubby plant, with ſquare ſtalks, oblong woolly leaves ſet in pairs; and labiated flowers wanting the upper lip and having the lower divided into five ſegments.

1. *Polium maritimum erectum monſpeliacum C. B. Teucrium capitatum Linn.* Poley-mountain of Montpellier; with the leaves indented towards the end and joined to the ſtalk without pedicles, the flowers white and ſet in roundiſh ſpikes on the tops of the branches.

2. *Polium anguſtifolium creticum C. B. Teucrium fruteſcens, ſtæchados arabicæ folio & facie Tourn. Teucrium creticum Linn.* Poley-mountain of Candy; with the leaves not indented and ſet on ſhort pedicles, the flowers ſtanding in looſe cluſters, each on a ſeparate foot-ſtalk.

Several other ſpecies, or varieties, of *polium*, erect and procumbent, with white, yellow, and purpliſh flowers, have been received in the ſhops. The ſecond above deſcribed has been commonly underſtood as the true officinal ſort, and procured dry from the iſland Candy, of which it is a native: the firſt, which better bears the winters of our own climate, appears to be of the ſame quality; and hence the college allow either ſort to be taken indifferently.

The leaves and tops of poley-mountain have a moderately ſtrong aromatic ſmell, and a diſagreeable bitter taſte: diſtilled with water, they yield a ſmall quantity of a yellowiſh eſſential oil, of a pungent taſte, in ſmell leſs agreeable than the herb itſelf; the remaining decoction, inſpiſſated, leaves a ſtrongly bitter extract. They ſtand recommended as corroborants, aperients, and antiſpaſmodics; but are at preſent ſcarcely otherwiſe made uſe of than as an ingredient in mithridate and theriaca.

POLYGALA.

MILKWORT: a ſmall perennial plant; with the leaves alternate, uncut, and thoſe on the upper parts of the ſtalks larger than on the lower; the flowers irregular, tubulous, tripetalous, labiated, ſet in looſe ſpikes on the tops; the cup compoſed of five leaves, the two larger of which continue after the flower has fallen, and embrace, like wings, a flat bicellular ſeed-veſſel.

1. SENEKA *Pharm. Edinb. Polygala (Senega) floribus imberbibus ſpicatis, caule erecto herbaceo ſimpliciſſimo, foliis lato-lanceolatis Linn.* Seneka or Senegaw milkwort, rattleſnake-rooted milkwort: with oblong, ſomewhat oval, pointed leaves; upright unbranched ſtalks; white flowers; and a variouſly bent and divaricated jointed root, about the thickneſs of the little finger, with a membranous margin running its whole length on each ſide, externally of a yellowiſh or pale browniſh colour, internally white. It is a native of Virginia, Penſylvania, and Maryland, and cultivated in ſome of our gardens.

THE root of this plant is ſaid to be the ſpecific of the Senegaw Indians againſt the poiſon of the bite of the rattleſnake; and to be effectual, when uſed early, even in the middle of the ſummer heats, when the poiſon is in its higheſt vigour, and when all their other antidotes fail. The powder or a decoction of the root is taken internally; and either the powder, or cataplaſms made with it, applied to the wound.

Dr. Tennent, obſerving that this poiſon produces ſymptoms reſembling thoſe of pleuriſies and peripneumonies (a difficulty of breathing, cough, ſpitting of coagulated blood, and a ſtrong quick pulſe) conjectured that it might be ſerviceable in thoſe diſtempers alſo: and from the trials made by the gentlemen of the French academy, as well as thoſe mentioned by him, its virtues appear to be great. It made the ſizy blood fluid, procured a plentiful ſpitting, increaſed perſpiration and urine, and ſometimes purged or vomited. The uſual doſe was thirty or thirty-five grains of the powder; or three ſpoonfuls of a decoction prepared by boiling three ounces of the root in a quart of water till near half the liquor was conſumed.

The ſeneka root has been tried likewiſe in hydropic caſes, and found in ſome inſtances to procure a copious evacuation by ſtool, urine, and perſpiration, after the common purgatives and diuretics had failed. Monſ. Bouvart obſerves, that though dropſies were thus removed by the ſeneka, the cure did not ſeem complete, a ſwelling and hardneſs of the ſpleen remaining, which ſometimes occaſioned a freſh extravaſation: that the medicine ſometimes acts by liquefying the blood and juices, without producing a due diſcharge; and that in theſe caſes it does harm unleſs aſſiſted by proper additions, but that ſo long as it proves cathartic, nothing is to be feared from it. It is ſaid to have been found ſerviceable alſo in the rheumatiſm and gout.

This root, of no remarkable ſmell, has a peculiar kind of ſubtile pungent penetrating taſte. Its virtue is extracted both by water and ſpirit, though the powder in ſubſtance is ſuppoſed to be more effectual than either the decoction or tincture. The watery decoction, on firſt taſting, ſeems not unpleaſant, but the peculiar pungency of the root quickly diſcovers itſelf, ſpreading through the fauces, or exciting a copious diſcharge of ſaliva, and frequently, as Linnæus obſerves, a ſhort cough: thoſe to whom I have directed this medicine, have generally found a little Madeira moſt effectual for removing its taſte from the mouth, and making it to ſit eaſy on the ſtomach. A tincture of the root in rectified ſpirit is of a more fiery pungency, extremely durable in the mouth and throat, and apt to promote vomiting or reaching.

2. Polygala: *Polygala vulgaris C. B. & Linn. Flos ambarvalis.* Common milkwort: with the ſtalks procumbent; the lower leaves roundiſh, the upper oblong, narrow, and pointed; the flowers blue, purpliſh or red, ſometimes white, with a kind of fringed appendix on the lower lip; the roots ſlender and hard. It grows wild in dry paſture grounds.

The roots of this ſpecies are ſomewhat ſimilar in taſte to thoſe of the preceding, but far weaker: they have been found likewiſe to produce the ſame effects in pleuriſies, in a lower degree. The leaves of the plant are very bitter: Geſner, who from this quality gives it the name of *amarella*, relates, that an infuſion of a handful of them in wine is a ſafe and gentle purgative.

POLYPODIUM.

POLYPODIUM Pharm. Edinb.(a) *Polypodium vulgare C.B. & Linn.* Polypody: a plant with long leaves iſſuing from the root, divided on both ſides, down to the rib, into a number of oblong ſegments, broadeſt at the baſe: it has no ſtalk, or manifeſt flower; the ſeeds are a fine duſt, lying on the backs of the leaves, in roundiſh ſpecks, which are diſpoſed in rows parallel to the rib: the roots are long and ſlender, of a reddiſh brown colour on the outſide, greeniſh within, full of ſmall tubercles, which are reſembled to the feet of an inſect, whence the name of the plant. It grows in the clefts of old walls, rocks, and decayed trees: that produced on the oak has been generally accounted the beſt, though not ſenſibly different from the others. It is found green at all ſeaſons of the year.

The leaves of polypody have a weak ungrateful ſmell, and a nauſeous ſweet taſte, leaving a kind of roughneſs and ſlight acrimony in the mouth. They give out their ſmell and taſte, together with a yellow colour, both to water and rectified ſpirit: the ſpirituous tincture is ſweeter than the watery, but in inſpiſſation its ſweetneſs is in great part deſtroyed or covered by the other matter; the ſpirituous extract, as Cartheuſer obſerves, being to the taſte only ſubaſtringent and ſubacrid, with very little ſweetneſs, while the watery extract ſeems to retain the full ſweetneſs of the polypody. The root is ſuppoſed to be aperient, reſolvent, and expectorant: it was formerly ranked among the purgatives, but operates ſo weakly, a decoction of an ounce or two ſcarcely moving the belly, that it has long been expunged from that claſs: the preſent practice pays very little regard to it in any intention.

POPULUS.

POPULUS NIGRA Pharm. Edinb.(a) *& C. B. & Linn. Populus nigra ſive aigeiros J. B.* Black poplar: a large tree; with dark green, ſomewhat rhomboidal acuminated leaves; producing imperfect flowers, in catkins: in ſome of the individuals, called male, the flowers are barren; in others, called female, they are followed by membranous pods, containing a number of ſeeds winged with down. It is indigenous in watery places, and quick of growth.

(a) Expunged.

THE young buds or rudiments of the leaves, which appear in the beginning of the ſpring, were formerly employed in an officinal ointment, which received its name from them. At preſent, they are almoſt entirely diſregarded; though they ſhould ſeem, from their ſenſible qualities, to be applicable to purpoſes of ſome importance. They abound with a yellow, unctuous, odorous, balſamic juice, which they readily impart, by maceration or digeſtion, to rectified ſpirit. The tincture, inſpiſſated, yields a fragrant reſin, ſuperiour to many of thoſe brought from abroad, and approach to the nature of ſtorax.

* A ſpecies of poplar growing in Siberia and in North America, called by Linnæus *Populus balſamifera*, is ſaid to be much more abundant in balſamic juice than the former, inſomuch that the buds give it out on mere expreſſion *(a)*.

PRUNELLA.

PRUNELLA ſive Brunella Ph. Edinb.(b) Prunella major folio non diſſecto C. B. Conſolida minor. Symphitum minus. Prunella vulgaris Linn. SELF-HEAL: a ſmall plant; with ſquare ſtalks; oval uncut leaves ſet in pairs on pedicles; and ſhort thick ſpikes of purpliſh labiated flowers. It is perennial, grows wild in paſture grounds, and flowers in June and July.

THIS herb is recommended as a mild reſtringent and vulnerary, in ſpittings of blood, and other hemorrhagies and fluxes; and in gargariſms againſt aphthæ and inflammations of the fauces. Its virtues do not appear to be very great: to the taſte it diſcovers a very ſlight auſterity or bitteriſhneſs; which is more ſenſible in the flowery tops than in the leaves; though the latter are generally directed for medicinal uſe.

(a) Bergius, *Mat. Med.* 804.

(b) Expunged.

PRUNUS.

PRUNUS: a tree with pentapetalous white flowers; each of which is ſucceeded by a roundiſh or oval fruit, ſtanding on a long pedicle, compoſed of a fleſhy pulp including a flat ſtone pointed at both ends.

1. Prunus hortensis. *Prunus domeſtica Linn.* Garden plum tree; without prickles; bearing a ſweet fruit. Three ſorts of this fruit are ranked among the articles of the materia medica: they are all met with in our gardens, but the ſhops are ſupplied with them, moderately dried, from abroad. 1. Pruna brignolensia *Pharm. Edinb.(a) Pruna ex flavo rufeſcentia mixti ſaporis gratiſſima C. B.* The Brignole plum or prunelloe, brought from Brignole in Provence, of a reddiſh yellow colour, and a very grateful ſweet ſubacid taſte. 2. Pruna gallica *Ph. Lond. & Edinb. Pruna parva dulcia atro-cæruiea C.B.* The common or French prunes, called by our gardeners the little black damaſk plum. 3. Pruna damascena: *Pruna magna dulcia atro-cærulea C. B.* Damſons, the larger damaſk violet plum of Tours: this is ſeldom kept in the ſhops, and has been generally ſupplied by the common prune.

All theſe fruits poſſeſs the ſame general qualities with the other ſummer fruits. The prunelloes, in which the ſweetneſs has a greater mixture of acidity than in the other ſorts, are uſed as mild refrigerants in fevers and other hot indiſpoſitions, and are ſometimes kept in the mouth for alleviating thirſt in hydropic caſes. The French prunes and damſons are the moſt emollient, lubricating and laxative: they are taken by themſelves for gently looſening the belly in coſtive habits and where there is a tendency to inflammation: decoctions of them afford an uſeful baſis for laxative or purgative mixtures, and the pulp in ſubſtance for electuaries.

2. Prunus silvestris *Pharm. Lond. & Edinb. & C. B. Acacia Germanorum. Prunus ſpinoſa Linn.* Black thorn or ſloe: a prickly buſh, common in hedges, producing auſtere fruit, ſomewhat ſmaller than an ordinary cherry.

(a) Expunged.

The fruit of the ſloe buſh is ſo harſh and auſtere, as not to be eatable till thoroughly mellowed by froſts. The juice expreſſed from it while unripe, or before it has been thus mellowed, inſpiſſated by a gentle heat to dryneſs, is called German acacia, and has been uſually ſold in the ſhops for the Egyptian juice of that name; from which it differs in being harder, heavier, darker coloured, of a ſharper or tarter taſte, and more remarkably in this, that it gives out its aſtringency in good meaſure to rectified ſpirit as well as to water, whereas that of the Egyptian acacia is not at all diſſoluble in ſpirit. A conſerve of this fruit is likewiſe prepared in the ſhops, by mixing the pulp with thrice its weight of double-refined ſugar: the ſloes being previouſly ſteeped in water, over the fire, with care that they do not burſt, till they are ſufficiently ſoftened to admit of the pulp being preſſed out through a ſieve. In ſome places, the unripe ſloes are dried in an oven, and then fermented with wines or malt liquors, for a reſtringent diet drink in alvine and uterine laxities.

Conſerv. prunor ſylveſtrium *Ph. Lond. & Ed.*

The bark, both of the branches and of the roots, is ſaid to have been given with ſucceſs in intermitting fevers, and by ſome ſtands recommended as equal to the Peruvian bark. It is apparently a ſtrong ſtyptic; and its ſtyptic matter is of that kind which is not eaſily extracted by watery menſtrua.

The flowers, in ſmell very agreeable, and in taſte bitteriſh, appear to have a laxative virtue, like thoſe of the peach tree or the damaſk roſe. They impregnate water, by diſtillation, ſtrongly with their fragrance; and give out their active matter, by infuſion, both to water and ſpirit. The watery infuſion, ſweetened with ſugar, or made into a ſyrup, is ſaid to be a very uſeful purgative for children.

PSYLLIUM.

PSYLLIUM Pharm. Pariſ. Pulicaris herba Lugdun. Pſyllium majus erectum C. B. Plantago Pſyllium Linn. FLEAWORT: an herb of the plantane kind, differing from the common plantanes in being annual, and having its ſtalks branched, with leaves upon them, which are long, ſlender, and ſomewhat hairy. It grows wild in the warmer parts of Europe, and is ſometimes raiſed in our gardens. The ſeeds have been uſually brought from the ſouth of France: they are ſmall, ſmooth, ſlippery, of a ſhining brown colour, of an oblong flattiſh figure ſuppoſed to reſemble that of a flea, whence the name of the plant.

The ſeeds of fleawort have a nauſeous mucilaginous taſte, and no remarkable ſmell: a dram renders near a pint of water ſlimy and yellowiſh: the decoction, inſpiſſated, leaves a ſtrong dark brown mucilage, which impreſſes on the palate an unpleaſant, weak, but penetrating acrimony. This mucilage has been employed chiefly in emollient glyſters, in gargariſms for hoarſeneſs and aſperity of the fauces, and in external applications for chaps of the lips and inflammations of the eyes. Proſper Alpinus relates, that among the Egyptians, the mucilage or an infuſion of the ſeeds is given internally, in ardent fevers; and that it generally either looſens the belly or promotes ſweat. The particular virtue of theſe ſeeds, or whatever virtue they may have diſtinct from that of mucilaginous ſubſtances in general, appears to reſide in the acrid matter, which may be ſeparated from the mucilaginous by rectified ſpirit: the ſeeds, digeſted in rectified ſpirit, give out their acrimony and ill taſte, and yield afterwards to water an almoſt inſipid mucilage.

PTARMICA.

PTARMICA, Pſeudopyrethrum, Pyrethrum ſilveſtre, Draco ſilveſtris, Tarchon ſilveſtris, Sternutamentoria: Dracunculus pratenſis ſerrato folio C. B. Achillæa Ptarmica Linn. Sneezewort or Bastard pellitory: a plant with long narrow leaves finely ſerrated about the edges, and radiated diſcous white flowers ſet in form of umbels on the tops of the branches. It is perennial, grows wild on heaths and in moiſt ſhady grounds, and is found in flower from June to the end of ſummer.

The roots of this plant have a hot biting taſte, approaching to that of pyrethrum, with which they nearly agree alſo in their pharmaceutic properties, and to which they have been ſometimes ſubſtituted in the ſhops. They are by ſome recommended internally as a warm ſtimulant and attenuant; but their principal uſe is as a maſticatory and ſternutatory.

PULEGIUM.

PENNYROYAL: a plant of the mint kind; differing from the mints ſtrictly ſo called, in the flowers being diſpoſed, not in ſpikes on the tops, but in thick cluſters, at diſtances, round the joints of the ſtalks; and the upper ſegment of the flower not being nipped at the extremity.

1. PULEGIUM *Pharm. Lond. & Edinb. Pulegium latifolium C. B. Mentha paluſtris ſive pulegium Pharm. Pariſ. Pulegium regium Ger. emac. Mentha pulegium Linn.* Common pennyroyal: with ſomewhat oval obtuſe leaves, and trailing ſtalks, ſtriking root at the joints. It grows wild on moiſt commons and in watery places, and flowers in June.

2. PULEGIUM ERECTUM: *Pulegium erectum officinarum Dale: Pulegium mas Ger. emac.* Upright pennyroyal; with the ſtamina ſtanding out from the flowers; ſaid to be a native of Spain, common in our gardens, and uſually ſubſtituted in our markets to the foregoing ſpecies.

3. PULEGIUM CERVINUM: *Pulegium anguſtifolium C. B. Mentha aquatica ſatureiæ folio Tourn. Mentha cervina Linn.* Harts pennyroyal: with ſmall oblong narrow leaves; ſaid to grow wild about Montpellier.

ALL the pennyroyals are warm pungent herbs, ſomewhat ſimilar to mint, but more acrid and leſs agreeable both in ſmell and taſte, leſs proper in common nauſeæ and weakneſs of the ſtomach, more efficacious as warm carminatives and deobſtruents in hyſteric caſes and diſorders of the breaſt: the laſt ſpecies is the ſtrongeſt, though leaſt ungrateful, of the three. Their active principle is an eſſential oil; of a more volatile nature than that of mint, coming over haſtily with water at the beginning of the diſtillation, and riſing alſo in great part with highly-rectified ſpirit; in taſte very pungent, and of a ſtrong ſmell; when newly drawn, of a yellowiſh colour with a caſt of green; by age turning browniſh. The oil, and a ſimple† and ſpirituous‡ water ſtrongly impregnated with it, by drawing off a gallon of water or proof ſpirit from a pound and a half of the dry leaves, are kept in the ſhops.

Ol. pulegii eſſent. *Ph.L.*

Aq. pulegii
† *Ph. Edinb.*
† ſimplex *Pharm.Lond.*
‡ ſpirituoſa *Pharm.Lond.*

PULMONARIA.

PULMONARIA MACULOSA Pharm Edinb.(a) Symphytum maculoſum ſive pulmonaria latifolia C. B. Pulmonaria officinalis Linn. SPOTTED LUNGWORT, JERUSALEM COWSLIPS, JERUSALEM SAGE: a hairy ſcabrous plant, with the leaves of a dark browniſh green colour on the upper ſide and ſpotted for the moſt part with white, underneath of a paler green, the lower oval and ſet on broad pedicles, thoſe on the ſtalks narrower, long-pointed, ſet alternately, without pedicles: the flowers are monopetalous, cut into five ſections, of a purple or blue colour, and ſometimes white, followed each by four ſeeds incloſed in the cup. It is perennial, grows wild in ſeveral parts of Europe, and flowers in our gardens in April and May.

The leaves of pulmonaria, recommended in hemoptoës, tickling coughs, aſperities of the fauces, *&c.* appear to be of little medicinal virtue. The dried leaves have hardly any ſmell; and their taſte is juſt perceptibly mucilaginous, ſweetiſh, and roughiſh. They ſeem to be nearly of the ſame nature with the *adianthum* and *trichomanes*.

**PULSATILLA.*

PULSATILLA NIGRICANS Stœrck, Pharm. Edinb. Pulſatilla flore minore nigricante C. B. Anemone pratenſis Linn. A ſpecies of anemone, much reſembling the *pulſatilla vulgaris*, or paſque flower, but its flower is leſs, and of a darker hue. It is a native of the ſouth of Germany, and other neighbouring countries.

All the anemonies have a conſiderable degree of acrimony; but this ſeems to poſſeſs the largeſt ſhare. The whole plant when chewed impreſſes the tongue with a ſharp, burning, durable taſte. The root is milder than the other parts. On diſtilling the plant with water, the liquor which comes over is ſtrongly impregnated with its virtues; and the remaining extract is alſo conſiderably active.

Dr. Stœrck of Vienna, to whom the introduction of ſo many of the more powerful vegetables is owing, has likewiſe recommended this to the medical practitioner. From numerous trials, he celebrates its efficacy in various chronic diſeaſes of the eye; in venereal nodes and nocturnal pains; in foul ulcers with caries; in ſerpigo; and ſuppreſſed menſes. He relates inſtances of its curing blindneſs of many years continuance, by diſſipating and diſſolving films and obſcurities of the cornea. In theſe caſes, its good effects were firſt indicated by conſiderable pain excited in the eye. The ſenſible operation of the medicine was nauſea and vomiting, particularly when the diſtilled water was uſed; an increaſed flow of urine; and ſometimes gripes and looſeneſs; with increaſed pain at firſt in the affected part. From all theſe circumſtances, the pulſatilla ſeems to be endued with very active and penetrating powers, yet ſuch as may be employed with perfect ſafety if proper caution be uſed. The doſe of the diſtilled water to adults is about half an ounce, twice or thrice a day; of the extract, reduced to powder with the addition of ſugar, five or ſix grains. Bergius mentions having given the extract copiouſly, eſpecially in diſeaſes of the eyes, but without any effect *(a)*.

(a) Expunged.

Extract. folior. Pulſatillæ nigricantis *Ph. E.*

The Edinburgh college had adopted the diſtilled water of pulſatilla, but has now changed it for the extract.

PYRETHRUM.

PYRETHRUM Pharm. Lond. & Edinb. Pyrethrum flore bellidis C. B. Chamæmelum ſpecioſo flore, radice longa fervida Shaw afr. Dentaria, herba ſalivaris, & pes alexandrinus quibuſdam. Anthemis Pyrethrum Linn. PELLITORY OF SPAIN: a trailing perennial plant; with finely divided leaves ſomewhat like thoſe of camomile or fennel; and naked thick ſtalks, bearing each a large flower, which conſiſts of a yellow diſk ſurrounded with petala of a pure white colour on the upper ſide and a fine purple underneath: the root, which ſinks deep in the ground like a carrot, is of a browniſh colour on the outſide and whitiſh within. It is a native of the warmer climates, but bears the cold of our own, and often produces flowers in ſucceſſion from January to May: the roots alſo, as Parkinſon obſerves, grow larger with us, than thoſe which the ſhops are ſupplied with from abroad.

PELLITORY root has a very hot pungent taſte, without any ſenſible ſmell. Its pungency reſides in a reſinous matter, of the more fixt kind;

(a) *Mat. Med.* 491.

being extracted completely by rectified ſpirit, and only in ſmall part by water; and not being carried off, in evaporation or diſtillation, by either menſtruum. The ſpirituous extract is extremely fiery, but in ſmall quantity, ſcarcely amounting to one twentieth of the weight of the root. The watery infuſion is nauſeous, but ſcarcely diſcovers any acrimony till concentrated by inſpiſſation; when reduced to the conſiſtence of an extract, it proves conſiderably pungent: the quantity of this extract is commonly five or ſix times as large as that of the ſpirituous. The root remaining, after the action of water, yields ſtill with rectified ſpirit a very fiery extract; whereas that, which has been digeſted in ſpirit, yields with water only an inſipid mucilaginous ſubſtance.

The principal uſe of pyrethrum, in the preſent practice, is as a maſticatory, for ſtimulating the ſalival glands, *&c.* and evacuating viſcid humours from the head and parts adjacent: by this means it frequently relieves toothachs, ſome kinds of headachs, lethargic complaints, and paralyſes of the tongue. It has ſometimes likewiſe been given internally, from a few grains to a ſcruple, as a hot ſtimulant and attenuant, in paralytic and rheumatic diſorders.

PYRITES.

MARCASSITA Pharm. Pariſ. PYRITES or MARCASITE: a hard foſſil; ſtriking fire with ſteel, copiouſly, and in large ſparks; becoming vitriolic, either by ſimple expoſure to the air, or by calcination and ſubſequent expoſure.

THIS mineral varies extremely in its appearances. It is found of a bright braſs yellow, of a greeniſh, of a grey or whitiſh colour, and of different intermediate or mixt ſhades; in maſſes, rarely of any great ſize, globular, oblong and flattiſh, cubical, octoedral, dodecaedral; ſometimes covered with a coat or cruſt, but oftener bare; internally ſometimes ſtriated, and ſometimes of an even and ſimple ſtructure *(a)*. It is met with in different places of this kingdom, and in moſt parts of the world; on the ſurface of the earth, on the ſea ſhores, in clay pits, embedded in earthy and ſtony bodies of various kinds.

(a) See Henckel's *Pyritologia oder kieſs-hiſtorie.*

The pyritæ conſiſt, in general, of ſulphur, iron, and unmetallic earth: in ſome, a little copper is joined to the iron; and in ſome, copper is the prevailing metal. In ſome, particularly the yellow kind, the quantity of ſulphur is large: in others, particularly the white, both the ſulphur and metal are in ſmall proportion.

If artificial mixtures of ſulphur with iron or copper be gently calcined, the inflammable principle of the ſulphur exhales, and its acid remains united with the metal, forming therewith a ſaline vitriolic compound: a mixture of iron filings and ſulphur, moiſtened with water, ſuffers a like change without external heat, and if the quantity is large, burſts ſpontaneouſly into fire. A reſolution of the ſame kind happens in the natural pyritæ on expoſing them to the air and rain; provided, where they are very ſulphureous, a part of the ſulphur be previouſly diſſipated by calcination. On this expoſure, they all become powdery and acquire a vitriolic taſte, the ferrugineous much more eaſily than thoſe which have any admixture of copper: ſome ſhoot out effloreſcences of vitriol upon the ſurface: from others, the ſaline matter, waſhed off by rain, is found to conſiſt chiefly of the ſulphureous or vitriolic acid. If the pyritæ, even ſuch as have the leaſt ſulphureous and metallic impregnation, as thoſe from which the Engliſh vitriol is made, be laid in large heaps, they grow hot, and take fire, and emit, during the burning, ſtrong diffuſive ſulphureous vapours *(a)*.

The pyritæ, in ſubſtance, are never uſed medicinally; but in their products they are very important. It is from theſe, that common ſulphur is extracted, in Sweden and Saxony; that the native vitriols are produced in caverns of the earth or on its ſurface; that the greateſt quantities of artificial vitriol are prepared; and that the chalybeate mineral waters are ſuppoſed to receive their impregnation: ſee the reſpective articles.

**QUASSIA.*

QUASSIA Pharm. Edinb. *Lignum Quaſſiæ Amœnit. Acad.* Vol. VI. *Bois de Coiſſi Fermin Surinam.* QUASSY ROOT: the woody root of a tree growing in Surinam, called by Linnæus, *Quaſſia amara,* of the claſs and order decandria monogynia in his ſyſtem. This root is as thick as a man's arm. Its wood is whitiſh, hard, ſolid, and tough, becoming yellowiſh on expoſure to the air. It is covered by a thin, grey, fiſſured, and brittle bark.

(a) Dr. Slare, *Philoſophical tranſactions, numb.* 213.

QUASSI root has no ſenſible odour. Its taſte is that of a pure bitter, more intenſe and durable than that of almoſt any other known ſubſtance. Its watery infuſions and decoctions, and its ſpirituous tinctures, are all almoſt equally bitter, of a pale yellowiſh hue, which is not blackened by the addition of martial vitriol. The watery extract is from a ſixth to a ninth of the weight of the wood; the ſpirituous, about a twenty-fourth. The bark of the root is reckoned in Surinam more powerful than the wood. The flowers alſo are a ſtrong bitter.

THE medical uſe of the quaſſi has been a conſiderable time known in Surinam. The flowers were long ago employed by the natives as an excellent ſtomachic. The root was a ſecret remedy uſed by a negro, named Quaſſi, in the fatal fevers of that country, from whom it was purchaſed by Dan. Rolander, a Swede, who returned from thence in 1756. Some ſpecimens of the wood and of the fructification were, in 1761, preſented by M. Dahlberg to the celebrated Linnæus; who drew up a botanical deſcription of the plant, with an account of its virtues, and publiſhed it in the ſixth vol. of the *Amœni. Acad.* A confirmation of its medical powers appeared in a letter from Mr. Farley, a practitioner in Antigua, printed in the *Phil. Tranſact.* Vol. LVIII. He found it remarkably efficacious in ſuppreſſing vomitings, ſtopping a tendency to putrefaction, and removing fevers. It ſeemed capable of producing all the good effects of Peruvian bark, without heating. Some further experiments on the quaſſia are contained in a late medical theſis by Dr. Ebeling. He confirms the general account of its virtues, with this additional circumſtance, that though its general antiſeptic powers were inferiour to thoſe of Peruvian bark, yet it preſerved bile a longer time from putrefaction. In this circumſtance it agrees with another pure bitter, the columbo root.

From theſe relations, the quaſſi appears to be a valuable addition to our tonic remedies, and has therefore obtained a place in the laſt Edinburgh and other pharmacopœias. It may be uſed either in infuſion, or extract:

the latter, made into pills, on account of the intenſe bitterneſs of the drug, is preferable for delicate ſtomachs.

QUERCUS.

QUERCUS Ph. Edinb. Quercus cum longis pediculis C. B. Quercus Robur Linn. OAK: a large tree, with oblong leaves, widening from the bottom to the extremity, and ſinuated or bluntly indented about the edges: the fruit is an acorn, or kernel with a coriaceous covering, incloſed at bottom in a ſcaly cup. It is a common foreſt tree in moſt parts of Europe.

THE bark of the oak is a ſtrong aſtringent, accompanied with a moderate bitterneſs, but no remarkable ſmell or particular flavour: with ſolution of chalybeate vitriol it ſtrikes an inky blackneſs. It is ſaid to have been employed with ſucceſs, not only for reſtraining hemorrhagies, and other immoderate evacuations, but likewiſe in intermitting fevers and in gleeting gangrenous wounds and ulcers; in which caſes, an extract made from it is ſaid by ſome to be equal to that of the Peruvian bark. A decoction of it uſed as a fomentation is ſaid to have cured a procidentia recti (a). It gives out its virtue both to water and rectified ſpirit.

QUERCUS MARINA.

QUERCUS MARINA ſive fucus veſiculoſus: Fucus maritimus ſive quercus maritima veſiculas habens C. B. Fucus veſiculoſus Linn. SEA WRACK or SEA OAK: a ſoft, very ſlippery, marine plant; common upon rocks that are left dry at the ebb tide; with the leaves ſomewhat reſembling in ſhape thoſe of the oak tree; the ſtalks running along the middle of the leaves, and terminated by warty bladders containing either air or a ſlippery fluid. The veſicles begin in March to fill with a thin juice; and about the end of July they burſt, and diſcharge a matter as thick as honey.

DR. RUSSEL relates, that he found this plant an uſeful aſſiſtant to ſea water in the cure of diſorders of the glands: that he gave it in powder to the quantity of a dram, and that in large doſes it nauſeated the ſtomach: that by burning in the open air it was reduced into a black ſaline powder; which ſeemed, as an internal medicine, greatly to excel the officinal burnt ſponge; which was uſed with benefit, as a dentifrice, for correcting laxities of the gums; and which ſhewed a notable degree of detergent virtue by its effect in cleaning the teeth: that the juice of the veſicles, after ſtanding to putrefy, yielded, on evaporation, an acrid pungent ſalt, amounting to above a ſcruple from two ſpoonfuls: that the putrefied juice, applied to the ſkin, ſinks in immediately, excites a ſlight ſenſe of pungency, and deterges like a ſolution of ſoap: that one of the beſt applications for diſcuſſing hardneſs, particularly in the decline of glandular ſwellings, is a mixture of two pounds of the juicy veſicles, gathered in July, with a quart of ſea water, kept in a glaſs veſſel for ten or fifteen days, till the liquor comes near to the conſiſtence of very thin honey: the parts affected are to be rubbed with the ſtrained liquor twice or thrice a day, and afterwards waſhed clean with ſea water.

(a) *Med. Eſſ. Edinb.* II. 257.

Æthiops vegetabilis *D. Ruſſel.*

**RADIX LOPEZIANA.*

RADIX INDICA LOPEZIANA Pharm. Edinb. Radix Indica a Joanne Lopez denominata Gaubii Adverſar. Cap. vi. *Rais di Juan Lopez Luſitanis.* The root of an unknown tree, growing, as ſome aſſert, at Goa, as others ſuppoſe, in Malacca, from whence it is ſometimes brought to Batavia. It is met with in pieces of different thickneſs, ſome, at leaſt, of two inches diameter. The woody part is whitiſh, and very light; ſofter, more ſpongy, and whiter next the bark, including a denſer ſomewhat reddiſh medullary part. The bark is rough, wrinkled, brown, ſoft, and as it were woolly, pretty thick, covered with a thin paler cuticle.

Neither the woody nor cortical part has any remarkable ſmell or taſte, nor any appearance of reſinous matter. On boiling in water, no odour is emitted; and the ſtrained liquor, which is of a yellow hue, is almoſt inſipid, only impreſſing the tongue with a very light obſcure bitteriſhneſs; and without viſcidity. The extract obtained by evaporating the decoction is equally void of ſenſible activity. Rectified ſpirit is tinged by the root of a brown colour, but acquires no particular taſte.

After drawing off the ſpirit from the tincture, a matter remains reſembling balſam, which bubbles and inflames in the fire, and has a bitteriſh taſte, like that of opium.

Though the preceding examination of this root is not favourable to the opinion of its medical powers, yet it is regarded in the Eaſt Indies as a medicine of extraordinary efficacy in diarrhœas; and the learned Gaubius, in his *Adverſaria*, has publiſhed an account of ſome experiments made with it, which in ſome degree confirm its reputation. From his own trials, and thoſe of his friends, it appeared moſt remarkably effectual in ſtopping colliquative diarrhœas which had reſiſted the uſual remedies. Thoſe attending the laſt ſtage of conſumptions were particularly relieved by its uſe. It ſeemed to act not by any aſtringent power, but by a faculty of reſtraining and appeaſing ſpaſmodic and inordinate motions in the inteſtines. Gaubius compares its action to that of ſimarouba, but thinks it more efficacious than this medicine.

The mode of exhibiting it in India, is to levigate the root with water on a porphyry till reduced to a fine pulp. In Europe the powder of it has been given with any proper vehicle, in doſes from fifteen to thirty grains, repeated three or four times a day: one practitioner found a tincture of it in common ſpirits equally effectual with the root in ſubſtance. Of this, a tea-ſpoonful was given thrice a day in red wine. The colleges of Edinburgh and Brunſwick have received this root into their catalogues; but it is ſcarcely yet to be met with in the ſhops.

RANUNCULUS.

CROWFOOT: a plant with pentapetalous flowers ſet in five-leaved cups; followed each by a round cluſter of naked ſeeds. It is perennial.

1. RANUNCULUS. *Ranunculus pratenſis radice verticilli modo rotunda C. B. Ranunculus bulboſus Linn.* Bulbous crowfoot, butter flower, gold cup: with a round tuberous root about the ſize of an olive; the leaves divided commonly into three ſegments, and theſe further ſubdivided; the ſtalks erect: the flowers of a bright gloſſy yellow, and their cups turned downwards. It is common in paſture grounds, and flowers in May.

2. Flammula: *Ranunculus longifolius paluſtris minor C. B. Ranunculus Flammula Linn.* Smaller water crowfoot or ſpearwort: with fibrous roots, long narrow leaves acuminated at both ends, and leaning or procumbent ſtalks. It grows in watery places or moiſt meadows, and flowers in June.

The roots and leaves of theſe plants are of no conſiderable ſmell, but in taſte highly acrid and fiery. Taken internally, they appear to be deleterious, even when ſo far freed from the cauſtic matter, by boiling in water, as to diſcover no ill quality to the palate. The effluvia likewiſe even of the leſs acrid ſpecies or varieties cultivated in gardens, when freely inſpired, have occaſioned headachs, anxieties, vomitings, and ſpaſmodic ſymptoms. The leaves and roots, applied externally, inflame and exulcerate or veſicate the part, and are liable to affect alſo the adjacent parts to a conſiderable extent (a): they have ſometimes, particularly among empyrics and the common people, ſupplied the place of the far ſafer and not leſs effectual veſicatory, cantharides, for procuring an ulcer and diſcharge of ſerum, in ſciaticas and ſome fixt pains of the head. Their pungency is diminiſhed by drying, and by long keeping ſeems to be diſſipated or deſtroyed.

RAPHANUS.

RAPHANUS RUSTICANUS Pharm. Lond. & Edinb. & C. B. Cochlearia folio cubitali Tourn. Cochlearia Armoracia Linn. Horseradish: a plant reſembling ſcurvygraſs in the flowers and ſeeds, but differing in the leaves being very large and long, and indented about the edges. It is ſometimes found wild about the ſides of ditches and rivulets, but for medicinal and culinary uſes is cultivated in gardens. It is perennial, flowers in June, rarely perfects its ſeeds, and is propagated from tranſverſe cuttings of the roots.

Horseradish root affects the organs both of taſte and ſmell with a quick penetrating pungency: it nevertheleſs contains in certain veſſels a ſweet juice, which ſometimes exudes in little drops upon the ſurface.

(a) Willis, *Pharmaceutice rationalis*, *P.* II. *ſect.* iii. *cap.* 3.

Its pungent matter is of a very volatile kind; being totally diſſipated in drying, and carried off in evaporation or diſtillation both by water and rectified ſpirit: as the pungency exhales, the ſweet matter of the root becomes more ſenſible, though this alſo is in great meaſure diſſipated or deſtroyed. It impregnates both water and ſpirit, by infuſion or by diſtillation, very richly with its active matter: in diſtillation with water it yields a ſmall quantity of eſſential oil exceedingly penetrating and pungent. This root appears therefore to agree with ſcurvygraſs and creſſes, and to differ from muſtard ſeed to which it is by ſome reſembled, in the volatility of its pungent matter, and its ſolubility in ſpirit.

Horſeradiſh is a moderately ſtimulating, aperient, and antiſeptic medicine: it ſenſibly promotes perſpiration, urine, and the expectoration of viſcid phlegm, and excites appetite when the ſtomach is weakened or relaxed, without being ſo liable to produce immoderate heat, or inflammatory ſymptoms, as the ſtimulants of the aromatic kind. It is principally uſed in paralytic and rheumatic complaints, in ſcurvies and ſcorbutic impurities of the humours, in cachectic diſorders, and in dropſies, particularly in thoſe which follow intermitting fevers. Taken in conſiderable quantities, it provokes vomiting.

RAPUM.

RAPUM Pharm. Edinb. (a) *Rapa ſativa rotunda C. B. Braſſica Rapa Linn.* TURNEP: a plant with a round root; jagged leaves, rude to the touch; tetrapetalous flowers, commonly yellow; and ſmall round ſmooth reddiſh or blackiſh ſeeds lodged in long pods. The garden turnep is ſuppoſed to be a variety produced by culture from the ſmaller ſort which grows wild in ſandy grounds in ſome parts of England. It is biennial.

TURNEPS are accounted a ſalubrious food; demulcent, detergent, ſomewhat laxative and diuretic; but liable in weak ſtomachs to produce flatulencies, and prove difficult of digeſtion: the liquor preſſed out from them after boiling, is ſometimes taken medicinally, in coughs and diſorders of the breaſt. The ſeeds have been accounted alexipharmac or diaphoretic: they have no ſmell, but diſcover to the taſte a mild acrimony, ſeemingly of the ſame nature with that of muſtard ſeed, though far weaker.

(a) Expunged.

RHABARBARUM.

RHUBARB: a plant with large dock-like leaves, among which ariſes a ſingle thick ſtalk bearing looſe cluſters of naked monopetalous bell-ſhaped flowers divided into ſix ſegments: each flower contains nine ſtamina (whereof the docks ſtrictly ſo called have but ſix), and is followed by a triangular ſeed ſurrounded about the edges with a leafy margin.

1. RHABARBARUM *Ph. Lond.* *Rheum Ph. Edinb.* *Lapathum orientale folio latiſſimo undulato & mucronato Mill. dict.* *Rheum undulatum foliis ſubvilloſis, petiolis æqualibus Linn.* Rhubarb: with the leaves ſomewhat heart-ſhaped, acuminated, and ſlightly hairy, and the pedicles plano-convex. It is a native of China and Siberia, and has lately been raiſed in ſome of our gardens, where it is found to grow with vigour in the open ground *(a)*.

Two ſorts of rhubarb roots are met with in the ſhops. The firſt is imported from Turkey and Ruſſia, in roundiſh pieces, freed from the bark, with a hole through the middle of each, externally of a yellow colour, internally variegated with lively reddiſh ſtreaks. The other, which is leſs eſteemed, comes immediately from the Eaſt Indies, in longiſh pieces, harder, heavier, and more compact than the foregoing. The firſt ſort, unleſs kept very dry, is apt to grow mouldy and worm-eaten: the ſecond is leſs ſubject to theſe inconveniencies. Some of the more induſtrious artiſts are ſaid to fill up the worm holes with certain mixtures, and to colour the outſide of the damaged pieces with powder of the finer ſorts of rhubarb, and ſometimes with cheaper materials. The

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(a) The plant above deſcribed is that which is generally reckoned the true rhubarb plant, having been produced from the ſeeds, ſent from Ruſſia, as thoſe of the true rhubarb, to Juſſieu at Paris, Rand at Chelſea, and Linnæus at Upſal. Dr. Hope received lately rhubarb ſeeds from the ſame country, which being ſown in the open ground at Edinburgh, produced a different ſpecies, *Rheum palmatum Linnæi,* with the leaves deeply cut into pointed ſegments. He obſerves that the root of this plant, though taken up too young, and at an improper ſeaſon, viz. in July, agreed perfectly with the beſt foreign rhubarb, in colour, ſmell, taſte, and purgative quality. See *Philoſoph. Tranſact.* vol. lv. for the year 1765.——Perhaps the roots of both ſpecies may be of the ſame quality, and taken promiſcuouſly.

marks of the goodneſs of rhubarb are, the livelineſs of its colour when cut; its being firm and ſolid, but not flinty or hard; its being eaſily pulverable, and appearing when powdered of a fine bright yellow colour; its imparting to the ſpittle, on being chewed, a deep ſaffron tinge, and not proving ſlimy or mucilaginous in the mouth. Its taſte is ſubacrid, bitteriſh, and ſomewhat ſtyptic; the ſmell, lightly aromatic.

Rhubarb is a mild cathartic, and commonly looked upon as one of the ſafeſt and moſt innocent of the ſubſtances of this claſs. Beſides its purgative virtue, it has a mild aſtringent one, diſcoverable by the taſte, and by its ſtriking an inky blackneſs with chalybeate ſolutions: hence it is found to ſtrengthen the tone of the ſtomach and inteſtines, to leave the belly coſtive, and to be one of the moſt uſeful purgatives in diarrhœas, dyſenteries, and all diſorders proceeding from a debility and laxity of the fibres: it is frequently indeed given with a view rather to this ſtomachic and corroborating virtue, than to its producing any conſiderable evacuation. It tinges the urine of a high yellow colour.

Rhabarb. torrefactum *Pharm. Lond.*

Rhubarb in ſubſtance purges more effectually than any preparation of it: the doſe is from a ſcruple to a dram. By roaſting it with a gentle heat, till it becomes eaſily friable, its cathartic power is diminiſhed, and its aſtringency ſuppoſed to be increaſed.

In its habitude to menſtrua, it differs remarkably from moſt of the other cathartic drugs, its purgative virtue being extracted far more perfectly by water than by rectified ſpirit: the root remaining after the action of water is almoſt, if not wholly, inactive; whereas, after repeated digeſtion in ſpirit, it proves ſtill very conſiderably purgative: the colour of both tinctures is a fine deep yellow, that of the ſpirituous paleſt; when the rhubarb has given out to ſpirit all that this menſtruum can extract, it ſtill imparts a deep colour, as well as a purgative impregnation, to water. The watery infuſion, in being inſpiſſated by a gentle heat, has its virtue ſo much diminiſhed, that a dram of the extract is ſaid to have ſcarcely any greater effect than a ſcruple of the root in ſubſtance: the ſpirituous tincture looſes leſs; half a dram of this extract proving moderately purgative, though ſcarcely more ſo than an equal quantity of the powder. The ſpirituous extract diſſolves almoſt wholly in water; and hence the tincture does not, like the ſpirituous infuſions of moſt other vegetables, turn milky on being mixed with aqueous liquors: of the watery extract, ſcarce above one fourth is diſſolved by rectified ſpirit, and the part that does not diſſolve proves more purgative than that which does.

*A watery infuſion is directed in the Edinburgh pharmacopœia, made by infuſing half an ounce of rhubarb for a night in eight ounces of boiling water, and adding to the ſtrained liquor one ounce of ſpirituous cinnamon water.

Infuſ. rhei *Phar. Edinb.*

Tinctures of this root are drawn in the ſhops with proof ſpirit and with mountain wine. The London college directs an ounce of rhubarb with two drams of cardamom ſeeds, and one of ſaffron *(a)*, for each tincture†: that of Edinburgh, orders for the vinous tincture, two ounces of rhubarb and one dram of canella alba to be infuſed in fifteen ounces of mountain wine, and two of proof ſpirit‡; for the ſimple ſpirituous tincture, three ounces of rhubarb, and half an ounce of leſſer cardamom ſeeds, to two pounds and a half of proof ſpirit||; in which, ſometimes are diſſolved, four ounces of ſugar candy§; and a compound tincture, compoſed of two ounces of rhubarb, half an ounce of gentian, one dram of ſnakeroot, and two pounds and a half of proof ſpirit§§. Theſe preparations are uſed chiefly as mildly laxative corroborants, in weakneſs of the ſtomach, indigeſtion, diarrhœas, colicky and other like complaints. The laſt tincture is, in many caſes, an uſeful aſſiſtant to the Peruvian bark in the cure of intermittents.

†Tinct. rhabarb. vinoſ. & ſpirituoſa *Pharm. Lond.*
‡Vinum rhei *Phar. Edinb.*
||Tinct. rhei.
§Tinct. rhei dulcis.
§§ Tinct. rhei amara *Phar. Edinb.*

The Turkey rhubarb is, among us, univerſally preferred to the Eaſt India ſort, though this laſt appears to be for ſome purpoſes at leaſt equal to the other. It is manifeſtly more aſtringent, but has ſomewhat leſs of an aromatic flavour. Tinctures made from both with equal quantities of rectified ſpirit, have nearly the ſame taſte: on drawing off the menſtrua, the extract left by the tincture of the Eaſt India rhubarb proves in taſte conſiderably ſtronger than the other. Both ſorts appear to be the produce of the ſame climate, and the roots of the ſame ſpecies of plant, taken up probably at a different ſeaſon, or cured in a different manner.

2. RHAPONTICUM *Pharm. Pariſ.* *Rhabarbarum dioſcoridis & antiquorum Tourn.* *Rhaponticum folio lapathi majoris glabro C. B.* *Rheum Rhaponticum Linn.* Rhapontic: with ſmooth roundiſh leaves, and

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(a) Saffron does not appear to be a very proper ingredient in theſe preparations, as it renders the taſte rather more unpleaſant; nor indeed does rhubarb ſeem, for general uſe, to want any aromatic addition.

ſomewhat channelled pedicles. It grows wild on the mountain Rhodope in Thrace, from whence it was brought into Europe by Alpinus about the year 1610: it bears the hardeſt winters of this climate.

The root of this plant, which appears to have been the true rhubarb of the ancients, is by ſome confounded with the modern rhubarb, though conſiderably different from that root in appearance as well as in quality. The rhapontic is of a duſky colour on the ſurface, and a looſe ſpongy texture; more aſtringent than rhubarb, and leſs purgative: in this laſt intention two or three drams are required for a doſe.

*RHODODENDRON.

RHODODENDRON CHRYSANTHEMUM. This plant, which is a new ſpecies of the *rhododendron* of Linnæus, diſcovered by Profeſſor Pallas, is a ſhrub growing near the tops of the high mountains named Sajanes, in the neighbourhood of the river Jeniſea in Siberia.

It is called by the natives of the place *chei*, or tea, from their commonly drinking a weak infuſion of it, as we do the Chineſe plant of that name. A ſtronger preparation of it is, however, uſed by them as a powerful medicine in arthritic and rheumatic diſorders. For this purpoſe, they take about two drams of the dried ſhrub, ſtalk and leaves together, and infuſe it in nine or ten ounces of boiling water for a night, in the heat of an oven. This is drunk next morning for a doſe; which occaſions heat, a degree of intoxication, with a ſingular uneaſy kind of ſenſation, and a ſort of *vermiculation* in the affected parts. The patient is not permitted to quench the thirſt this medicine occaſions, as liquids, eſpecially cold water, would produce vomiting, and diminiſh the effect of the remedy. In a few hours, all diſagreeable ſymptoms go off, commonly with two or three ſtools; and the patient finds his diſeaſe greatly relieved. A repetition of the doſe twice or thrice generally completes the cure. This is the ſubſtance of the account given in a letter from Dr. Guthrie, of Peterſburgh, to Dr. Duncan, *Med. Comment.* Vol. V. p. 434.

The rhododendron has been ſince tried by Dr. Home in the Infirmary at Edinburgh; and the reſult of his trials, as publiſhed in his *Clinical Caſes and Experiments*, is, that it is a very powerful ſedative, remarkably diminiſhing the frequency of the pulſe; but that it was not peculiarly efficacious in removing the acute rheumatiſm.

RICINUS.

RICINUS & ricinoides: large plants, with ſmall flowers in cluſters, and the fruit growing at a little diſtance from, or ſucceeding only a few of, the flowers: the fruit conſiſts of three capſules, containing each a ſingle ſeed, flatted on one ſide, generally about the ſize of a ſmall bean, compoſed of a thin ſkin or ſhell including an oily kernel.

1. PALMA-CHRISTI *Pharm. Pariſ. Ricinus, cataputia major, cherva major, kiki, & granum regium quibuſdam: Ricinus vulgaris C. B. Ricinus communis Linn.* Palma-chriſti, Mexico ſeed: with the fruit triangular, the ſeed furniſhed with a little knob at one end, externally variegated with blackiſh and whitiſh ſtreaks, reſembling both in ſhape and colour the inſect *ricinus* or tick.

2. RICINOIDES, *ſeu pineus purgans, vel pinhones indici Pharm. Pariſ. Carcas, nux barbadenſis, & faba purgatrix quibuſdam: Ricinus americanus major ſemine nigro C. B. Jatropha Curcas Linn.* Barbadoes nut: with an oval walnut-like fruit, and oblong black ſeeds.

3. AVELLANA PURGATRIX *C. B. Nuces purgantes Ger. Jatropha multifida Linn.* Purging nut: with oval fruit, and roundiſh, ſomewhat triangular, pale browniſh ſeeds.

4. TIGLIUM, *grana tiglia. Pinus indica nucleo purgante, & lignum moluccenſe foliis malvæ, fructu avellanæ minore, cortice molliore & nigricante, pavana incolis C. B. Croton Tiglium Linn.* Grana tilia: with roundiſh fruit, and dark greyiſh ſeeds in ſhape nearly like thoſe of the firſt ſpecies.

THE firſt of theſe plants is ſaid to be found wild in ſome of the ſouthern parts of Europe: it is biennial. The others are middling ſized trees, natives of America and the Eaſt Indies, from whence the ſeeds are ſometimes brought to us.

THE two firſt of theſe ſeeds are ſweetiſh, nauſeous, and acrid: the third has ſcarcely any acrimony, and taſtes nearly like almonds: the fourth is intenſely hot and acrimonious. They are all ſtrong evacuants, operating, in doſes of a few grains, both upwards and downwards; the ſweet ſpecies not excepted. The grana tilia are the moſt violent, too much ſo to be taken with any tolerable ſafety; and indeed they all appear too draſtic to be ventured on in ſubſtance.

They yield upon expreſſion a conſiderable quantity of oil, impregnated more or leſs with the taſte and the purgative quality of the ſeeds: of the oil of the grana tilia, Geoffroy limits the doſe to one grain, which is probably an error of the preſs for one dram: that of the Barbadoes nut is ſaid to be taken in America in larger quantities, and to purge without much inconvenience.

The oil of the palma-chriſti, vulgarly called in America caſtor oil, has been often given from two to four ſpoonfuls, and found to act as a ſufficiently mild laxative: it is ſaid to be particularly uſeful in the dry-belly-ach, and in other diſorders where irritating purgatives cannot be borne, and where the common laxatives, on account of the large doſe in which they require to be given, are apt to be rejected by the ſtomach. From ſuch trials as I have made of this medicine, it did not ſeem to have any peculiar good qualities, or to produce any other effects than may be equally obtained by combining the more common purgatives, as tincture or infuſion of ſena, with common oil.—It is ſaid that ſome, or all, of the above oils act as purgatives, when applied externally to the umbilical region.

The wood and leaves of the plants are likewiſe ſtrong cathartics: Hermann relates, that the wood of the tilia, called *panava* or *pavana*, operates violently, when freſh, in the doſe of a ſcruple or half a dram: that when dried and long kept, it is given to the quantity of a whole dram as a purgative, and in ſmaller doſes as a ſudorific. Among us, all theſe ſubſtances are entire ſtrangers to practice (except that the oil of the firſt ſpecies has of late been ſometimes made uſe of;) and, ſo far as can be judged from the accounts given of them, they have little claim to be received *(a).

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*(a) The *oleum ricini* has increaſed in reputation ſince the above was written, and is now much uſed as an aperient in calculous, nephritic, and various other caſes. It is however liable to the inconvenience of great uncertainty in its operation, owing, probably, to the different degree of genuineneſs of different ſpecimens of the oil.

ROSA.

ROSA.

ROSE: a prickly buſh; with oval ſerrated leaves, ſet in pairs along a middle rib, which is terminated by an odd one; producing large elegant flowers, whoſe cup is divided into five long ſegments, with a knob at the bottom, which becomes an umbilicated ſoft fruit full of hairy ſeeds.

1. ROSA DAMASCENA *Pharm. Lond.* *Roſa pallida Pharm. Edinb.* *Roſa purpurea C. B.* *Roſa centifolia Linn.* The damaſk roſe: with double flowers, of the fine pale red called from them roſe-colour.

The pleaſant ſmell of damaſk roſes is of a leſs periſhable kind than that of many other odoriferous flowers, not being much diminiſhed in drying, nor ſoon diſſipated in keeping. They impart their odorous matter to watery liquors both by infuſion and diſtillation: ſix pounds of the freſh roſes impregnate, by diſtillation, a gallon or more of water ſtrongly with their fine flavour. On diſtilling large quantities, there ſeparates from the watery fluid a ſmall portion of a fragrant butyraceous oil, which liquefies by heat and appears yellow, but concretes in the cold into a white maſs: an hundred pounds of the flowers, according to the experiments of Tachenius and Hoffman, afford ſcarcely half an ounce of oil. The oil and water, uſed chiefly as perfumes and flavouring materials, are recommended by Hoffman as excellent cordials, for raiſing the ſtrength and ſpirits, and allaying pain. They appear to be of a very mild nature, and not liable to irritate or heat the conſtitution; even the eſſential oil diſcovering to the taſte but little pungency.

Aq. roſar. damaſcen. *Pharm. Lond.* pallid. *Ph. E.*

Theſe flowers contain likewiſe a bitteriſh ſubſtance; which is extracted by water along with the odoriferous principle; which, after this laſt has been ſeparated by diſtillation or evaporation, is found entire in the remaining decoction; and which appears to be of a gently purgative nature. The decoction, or a ſtrong infuſion of the flowers, made into a ſyrup with a proper quantity of ſugar, proves an uſeful laxative for children, in doſes of a ſpoonful: of the extract obtained by inſpiſſating the decoction, from a ſcruple to a dram is ſaid to be ſufficient for adults. The college of London directs the ſyrup to be made, by preſſing out the liquor remaining after the diſtillation of ſix pounds of damaſk roſes, and boiling it down to three pints; then, after it has ſettled for a night,

Syrup. roſar. ſolutiv. *P. L.* roſar. pallid. *Phar. Edinb.*

adding five pounds of fine ſugar, and boiling the mixture to the weight of ſeven pounds and a half: a ſpoonful of this ſyrup appears to be equivalent to about three drams of the freſh flowers. The ſolutive matter of the flowers is combined alſo in the ſame manner, for the purpoſes of glyſters, with brown ſugar and honey: towards the end of the boiling down of the ſtrained decoction, an ounce of cummin ſeeds, bruiſed a little and tied in a linen cloth, is added; and the liquor afterwards boiled with four pounds of brown ſugar and two of honey.

Mel. ſolutiv. *Pharm. Lond.*

Rectified ſpirit extracts both the odoriferous and the purgative matter of the damaſk roſe, equally with water, or rather more completely. The ſpirit, diſtilled off from the filtered tincture, proves lightly impregnated with the fragrance of the flowers, and the inſpiſſated extract retains likewiſe a part of their flavour along with the bitteriſh matter. This extract, in quantity ſmaller, and in taſte ſtronger, may be preſumed to be more purgative, than that made with water.

2. ROSA RUBRA *Pharm. Lond. & Edinb.* *Roſa rubra multiplex C. B.* *Roſa gallica Linn.* The red roſe: with double flowers of a deep red colour.

The red roſe has very little of the fine flavour admired in the pale ſort: to the taſte, it is bitteriſh and ſubaſtringent. The aſtringency is greateſt before the flowers have opened, and, in this ſtate, they are choſen for medicinal uſe as a mild corroborant: the full-blown flowers are probably as laxative as thoſe of the foregoing ſpecies, for Poterius relates, that he found a dram of powdered red roſes occaſion three or four ſtools, and this not in a few inſtances, but conſtantly, in an extenſive practice, for ſeveral years. The aſtringency of the buds is improved by haſty exſiccation in a gentle heat: by ſlow drying, both the aſtringency and the colour are impaired.

Conſerva roſarum *Phar. Lond. & Edin.*

The freſh buds, clipt from the white heels, and beaten with thrice their weight of fine ſugar, form an agreeable and uſeful conſerve; which is given in doſes of a dram or two, diſſolved in warm milk, in weakneſſes of the ſtomach, coughs, and phthiſical complaints. Inſtances are mentioned in the German ephemerides, and in Riverius's praxis, of very dangerous phthiſical diſorders being cured by the continued uſe of this medicine: in one of theſe caſes, twenty pounds of the conſerve were taken in the ſpace of a month, and in another upwards of thirty pounds.

Mixtures of the roſes with a larger proportion of ſugar are made in the ſhops into lozenges: one part of the buds clipt from the heels and haſtily dried, and twelve parts of fine ſugar, are ſeparately reduced into powder, then mixed, and moiſtened with ſo much water as will render them of a due conſiſtence for being formed: or the conſerve is mixed with as much freſh ſugar as is ſufficient to bring it to a like conſiſtence, that is, about thrice its own weight.

Saccharum roſaceum *Ph. Lond.*

Theſe flowers give out their virtue both to water and rectified ſpirit, and tinge the former of a fine red colour, but the latter of a very pale one: the extract obtained by inſpiſſating the watery infuſion, is moderately auſtere, bitteriſh, and ſubſaline; the ſpirituous extract is conſiderably ſtronger both in aſtringency and bitterneſs. In the ſhops, ſeven ounces of the dried roſe-buds are infuſed in five pounds of boiling water; and the infuſion made into a ſyrup with ſix pounds of fine ſugar †, or boiled to a ſyrupy conſiſtence with ſeven ‡ pounds of clarified honey: the ſyrup is valued chiefly for its gratefulneſs and fine red colour: the mixture with honey is uſed as a mild cooling detergent, particularly in gargariſms for inflammations and ulcerations of the mouth and tonſils. The infuſions acidulated with a little vitriolic acid, and ſweetened with ſugar, make a grateful, cooling, reſtringent julep, which is ſometimes directed in hectic caſes and hemorrhagies, and along with boluſes or electuaries of Peruvian bark, and ſometimes is uſed as a gargariſm: the college of London orders two pints and a half of boiling water, mixed with a ſcruple of oil of vitriol, to be poured on half an ounce of the freſh buds, and an ounce and a half of fine ſugar to be diſſolved in the ſtrained infuſion: that of Edinburgh orders two pounds and a half of water, and half a dram of the acid, to half an ounce of the dry buds and an ounce of ſugar.

† Syrup. e roſis ſiccis *Phar. Edinb.*

Mel roſaceum ‡ *Ph. Lon.*

Tinctura roſarum *Ph. L.*

Infuſum *vulgo* Tinct. roſarum *Ph. Ed.*

3. CYNOSBATOS *Pharm. Lond.* *Roſa ſilveſtris vulgaris flore odorato incarnato C. B.* *Roſa ſilveſtris inodora ſeu canina Park.* *Cynorrhodon.* *Roſa canina Linn.* Dog-roſe, wild briar, hipp-tree: with ſingle pentapetalous flowers, of a whitiſh colour mixed with various ſhades of red. It is one of the largeſt plants of the roſe kind; grows wild in hedges; and flowers, as the garden ſorts, in June.

The flowers of this ſpecies, of an agreeable but weak ſmell, and in taſte bitteriſh and roughiſh, are ſaid to have a greater degree of laxative virtue than thoſe of the damaſk roſe, together with a mild corroborating or reſtringent quality. The fruit, the only part of the dog-roſe made uſe of in medicine among us, is agreeably dulco-acid, and ſtands recommended as a cooling reſtringent, in bilious fluxes, ſharpneſs of urine, and hot indiſpoſitions of the ſtomach: the freſh pulp is made in the ſhops into a conſerve, by mixing three ounces of it with five of fine ſugar. The pulp ſhould be ſeparated with great care from the rough prickly matter which incloſes the ſeeds; a ſmall quantity of which, retained in the conſerve, is apt to occaſion an uneaſineſs at the ſtomach, pruritus about the anus, and ſometimes vomiting.

Conſ. fructus cynoſbati *Pharm. Lond.*

ROSMARINUS.

ROSMARINUS Pharm. Lond. & Edinb. Roſmarinus hortenſis anguſtiore folio C. B. Libanotis coronaria quorundam. Roſmarinus officinalis Linn. ROSEMARY: a large ſhrubby plant, clothed with long narrow ſtiff leaves, ſet in pairs, of a dark green colour above and hoary underneath; producing pale blueiſh labiated flowers, which ſtand in cluſters round the ſtalk in the boſoms of the leaves. It is a native of the ſouthern parts of Europe, common in our gardens, and ſeems to grow larger and more woody in this than in moſt other countries. It flowers in April and May, and ſometimes again about the end of Auguſt.

ROSEMARY is a warm pungent aromatic; particularly uſeful in phlegmatic habits and debilities of the nervous ſyſtem; of the ſame general nature with lavender, but with more of a camphorated kind of pungency, and of a ſtronger, and to moſt people leſs grateful, ſmell. The tender tops are the ſtrongeſt both in ſmell and taſte, and next to theſe the cups of the flowers; which laſt, though ſomewhat weaker than the leaves or tops, are nevertheleſs the moſt pleaſant, and hence are generally preferred: it is chiefly, if not wholly, in the cup, that the active matter of the flower reſides; for the blueiſh petalum, carefully ſeparated, has very little ſmell or taſte. The fragrance of theſe flowers is greatly diminiſhed, or in great meaſure deſtroyed, by bruiſing or beating; and hence the officinal conſerve, made by beating them with thrice their weight of ſugar, has very little of the flavour of the roſemary.

Conſerv. flor. roriſmarini *Pharm. Lond.*

The leaves and tops of roſemary give out their virtues completely to rectified ſpirit, but only partially to water: the ſpirituous tinctures are of a yellowiſh green colour, the aqueous of a dark greeniſh brown. Diſtilled with water, they yield a thin, light, pale coloured eſſential oil, inclining a little to yellowiſh or greeniſh, of great fragrancy, though not quite ſo agreeable as the roſemary itſelf: from one hundred pounds of the herb in flower were obtained eight ounces of oil: the decoction, thus diveſted of the aromatic part of the plant, yields on being inſpiſſated an unpleaſant weakly bitteriſh extract. Rectified ſpirit likewiſe, diſtilled from roſemary leaves, becomes conſiderably impregnated with their fragrance, leaving however in the extract the greateſt ſhare both of their flavour and pungency. The active matter of the flowers is ſomewhat more volatile than that of the leaves, greateſt part of it ariſing with ſpirit. The Hungary water, uſed as a perfume, and ſometimes medicinally in nervous complaints, and which is ſaid to have received its name from its being firſt made public by an empreſs of that nation who was cured by its continued uſe of a paralytic diſorder, is a ſtrong ſpirit diſtilled from freſh roſemary flowers: the college of Edinburgh directs a gallon of rectified ſpirit to be drawn over in the heat of a water bath from two pounds of the flowers as ſoon as they are gathered †: that of London takes the tops, and a ſpirit not quite ſo ſtrong; putting a gallon of proof ſpirit to a pound and a half of the freſh tops, and drawing off in the heat of a water bath five pints ‡. The Hungary water brought from France is more fragrant than ſuch as is generally prepared among us.

Ol. roriſmar. eſſent. *Phar. Lond. & Edin.*

Sp. roriſmar.

† *Ph. Edinb.*

‡ *Ph. Lond.*

RUBIA.

RUBIA TINCTORUM Pharm. Lond. & Linn. Rubia Pharm. Edinb. Rubia tinctorum ſativa C. B. Radix rubra, & erythrodanum quibuſdam. MADDER: a rough procumbent plant, with ſquare jointed ſtalks, and five or ſix oblong pointed leaves ſet in form of a ſtar at every joint: on the tops come forth greeniſh yellow monopetalous flowers, deeply divided into four, five, or ſix ſegments, followed by two black berries: the root is long, ſlender, juicy, of a red colour both externally and internally, with a whitiſh woody pith in the middle. It is perennial, and cultivated in different parts of Europe (in ſome of which it is ſaid to be indigenous) for the uſe of the dyers: the roots have been brought to us chiefly from Zealand; but thoſe which have for ſome years paſt been raiſed in England, appear ſuperiour to the foreign, both as a colouring and a medicinal drug.

The roots of madder have a bitteriſh, ſomewhat auſtere taſte, and a ſlight ſmell, not of the agreeable kind. They impart to water a dark red tincture, to rectified ſpirit and diſtilled oils a bright red: both the watery and ſpirituous tinctures taſte ſtrongly of the madder. The root taken internally tinges the urine and milk red; and in the philoſophical tranſactions, and the memoirs of the French academy of ſciences, there are accounts of its producing a like effect upon the bones of animals with whoſe food it had been mixed: all the bones, particularly the more ſolid ones, were changed both externally and internally to a deep red, though neither the fleſhy nor the cartilaginous parts ſuffered any alteration. The bones, ſo tinged, gave out nothing of their colour either to water or ſpirit of wine.

This root appears therefore to be poſſeſſed of great ſubtility of parts, which may poſſibly render its medical virtues more conſiderable than they are now in general ſuppoſed to be. It has been chiefly recommended as a reſolvent and aperient, in obſtructions of the viſcera, particularly of the urinary organs, in coagulations of blood from falls or bruiſes, in jaundices, and in beginning dropſies. * It has lately come into reputation as an emmenagogue, and is ſaid to be a very efficacious medicine of this claſs (a). From a ſcruple to half a dram of the powder, or two ounces of the decoction, may be given three or four times a day in this intention.

RUSCUS.

RUSCUS ſive Bruſcus Pharm. Edinb. (b) *Ruſcus C. B. Ruſcus myrtifolius aculeatus Tourn. Oxymyrſine, myrtacantha, myacantha & ſcopa regia quibuſdam. Ruſcus aculeatus Linn.* BUTCHERS-BROOM or KNEEHOLLY: a low woody plant, with oblong ſtiff prickly leaves joined immediately to the ſtalks: from the middle ribs of the leaves, on the upper ſide, iſſue ſmall yellowiſh flowers ſucceeded by red berries:

(a) Home's *Clinical Caſes and Experiments.*

(b) Expunged.

the root is pretty thick, knotty, furniſhed with long fibres matted together, of a pale browniſh colour on the outſide and white within. It grows wild in woods and on heaths, is perennial and evergreen, flowers in May, and ripens its berries in Auguſt.

The root of butchers-broom has a ſweetiſh taſte, mixed with a ſlight bitteriſhneſs. It ſtands recommended as an aperient and diuretic, in urinary obſtructions, nephritic caſes, dropſies, *&c.* Riverius tells us of an hydropic perſon who was completely cured by uſing a decoction of butchers-broom for his only drink, and taking two purges of ſena. The virtues of the root are extracted both by water and ſpirit, and on inſpiſſating the liquors, ſeem to remain entire behind: neither of the extracts is very ſtrong in taſte; the watery the leaſt ſo.

R U T A.

RUTA Pharm. Lond. & Edinb. Ruta hortenſis latifolia C. B. Ruta graveolens Linn. Rue: a ſmall ſhrubby plant, with thick blueiſh green leaves divided into numerous roundiſh ſegments: on the tops of the branches come forth yellowiſh tetrapetalous (ſometimes pentapetalous) flowers, followed each by a capſule, which is divided into four partitions full of ſmall blackiſh rough ſeeds. It is cultivated in gardens, flowers in June, and holds its leaves all the winter. The markets are frequently ſupplied with a narrow-leaved ſort, which is cultivated in preference to the other, on account of its appearing variegated during the winter with white ſtreaks.

This herb has a ſtrong unpleaſant ſmell, and a penetrating pungent bitteriſh taſte: much handled, it is apt to inflame and exulcerate the ſkin. It is recommended as a powerful ſtimulant, aperient, antiſeptic, and as poſſeſſing ſome degree of an antiſpaſmodic power; in crudities and indigeſtion, for preſerving againſt contagious diſeaſes and the ill effects of corrupted air, in uterine obſtructions and hyſteric complaints, and externally in diſcutient and antiſeptic fomentations. Among the common people, the leaves are ſometimes taken with treacle, on an empty ſtomach, as an anthelmintic. A conſerve, made by beating the freſh leaves

Conſerv. fol. rutæ *Ph. Lon.*

leaves with thrice their weight of fine ſugar, is the moſt commodious form for the exhibition of the herb in ſubſtance.

The virtues of rue are extracted both by water and rectified ſpirit, moſt perfectly by the latter: the watery infuſions are of a greeniſh yellow or browniſh; the ſpirituous, made from the freſh leaves, of a deep green, from the dry of a dark yellowiſh brown colour: the leaves themſelves, in drying, change their blueiſh green colour to a yellow. On inſpiſſating the ſpirituous tincture, very little of its flavour riſes with the menſtruum; nearly all the active parts of the rue remaining concentrated in the extract, which impreſſes on the palate a very warm, ſubtile, durable pungency, and is in ſmell rather leſs unpleaſant than the herb in ſubſtance. In diſtillation with water, an eſſential oil ſeparates; in colour yellowiſh or browniſh, in taſte moderately acrid, and of a very penetrating ſmell rather more unpleaſant than that of the herb: a very conſiderable part of the virtue of the rue remains behind; the decoction, inſpiſſated, yielding a moderately warm, pungent, bitteriſh extract. The active matter of this plant appears therefore to be chiefly of the more fixt kind: the eſſential oil itſelf is not very volatile, or at leaſt is ſo ſtrongly locked up by the other principles, as not to be readily elevated in diſtillation. The ſeeds and their capſules appear to contain more oil than the leaves: from twelve pounds of the leaves, gathered before the plant had flowered, only about three drams were obtained; whereas the ſame quantity of the herb with the ſeeds almoſt ripe yielded above an ounce.

Oleum rutæ eſſentiale *Ph. Lond.*

Extractum rutæ *Pharm. Lond.&Edin.*

SABINA.

SABINA Pharm. Lond. & Edinb. Sabina folio tamariſci dioſcoridis C. B. Savina quibuſdam. Juniperus Sabina Linn. SAVIN: an evergreen ſhrub or ſmall tree, clothed with very ſhort narrow leaves ſo ſtiff as to be prickly; producing ſmall imperfect flowers, and ſometimes, when grown old, blueiſh black berries like thoſe of juniper, of which the modern botany reckons it a ſpecies. It is a native of ſome of the ſouthern parts of Europe, and raiſed with us in gardens.

THE leaves and tops of ſavin have a moderately ſtrong ſmell, of the diſagreeable kind; and a hot, bitteriſh, acrid taſte. They give out great part of their active matter to watery liquors, and the whole to rectified ſpirit; tinging the former of a browniſh, and the latter of a dull dark green colour. Diſtilled with water, they yield a large quantity of eſſential oil: Hoffman ſays, that from thirty-two ounces he obtained full five ounces of oil, and obſerves that there is no other known vegetable ſubſtance, except ſome of the reſinous juices, as turpentine, that affords ſo much. The oil ſmells ſtrongly, and taſtes moderately of the ſavin: decoctions of the leaves, freed from this volatile principle by inſpiſſation to the conſiſtence of an extract, retain a conſiderable ſhare of their pungency and warmth along with their bitteriſhneſs, and have likewiſe ſome degree of ſmell, but not reſembling that of the plant itſelf. On inſpiſſating the ſpirituous tincture, there remains an extract conſiſting of two diſtinct ſubſtances; one yellow, unctuous or oily, bitteriſh and very pungent; the other black, reſinous, tenacious, leſs pungent, and ſubaſtringent.

Ol. eſſent. ſabinæ *Phar. Lond.&Edin.*

Extractum ſabinæ *P. L.*

Savin is a warm ſtimulant and aperient; ſuppoſed particularly ſerviceable in uterine obſtructions, proceeding from a laxity or weakneſs of the veſſels, or a cold ſluggiſh indiſpoſition of the juices. The diſtilled oil is accounted one of the moſt potent emmenagogues: it is likewiſe a ſtrong diuretic, and, as Boerhaave obſerves, impregnates the urine with its ſmell. * The powdered leaves have been recommended as a very effectual eſcharotic for conſuming warty venereal excreſcences *(a)*.

SACCHARUM.

SUGAR: a ſweet ſubſtance, of a ſaline nature; prepared from the juice of an elegant large cane or reed, *arundo ſaccharifera C. B.* which grows ſpontaneouſly in the Eaſt Indies and ſome of the warmer parts of the Weſt, and is cultivated in large plantations in ſeveral of the American iſlands. The expreſſed juice of the cane is clarified with the addition of lime water, and boiled down to a ſomewhat thick conſiſtence: being then removed from the fire, the ſaccharine part concretes into brown coloured maſſes, *ſaccharum rubrum Pharm. Lond. & Edinb.* leaving an unctuous liquid matter called melaſſes or treacle, from which a little more ſolid ſugar, but of a coarſer kind, is obtainable by a repetition of the boiling and clarification. The brown ſugar is purified in conical

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(a) Med. Eſſ. Edinb. III. 395.

moulds, by ſpreading, on the upper broad ſurface, ſome moiſt clay; whoſe watery moiſture, ſlowly percolating through the maſs, carries with it a conſiderable part of the remains of the treacly matter. The clayed ſugar, imported from America, is by our refiners diſſolved in water, the ſolution clarified with whites of eggs, and after due inſpiſſation, poured as before into conical moulds, where, as ſoon as the ſugar has concreted, and the fluid part is drained off by an aperture at the bottom, the ſurface of the loaf is again covered with moiſt clay. The ſugar, thus once refined, *ſaccharum album Pharm. Edinb.* becomes, by a repetition of the proceſs, the double-refined ſugar of the ſhops, *ſaccharum puriſſimum Pharm. Lond.* Solutions of the brown or white ſugars, boiled down till they begin to grow thick, and then removed into a very hot room, ſhoot, upon ſticks placed acroſs the veſſels for that purpoſe, into brown or white cryſtals or candy, *ſaccharum cryſtallinum Pharm. Edinb.*

Sugar diſſolves, by the aſſiſtance of heat, in rectified ſpirit; but greateſt part of it ſeparates again in the cold, and concretes into a cryſtalline form: On this foundation, ſaccharine concretions are obtained from ſaturated ſpirituous tinctures of ſeveral of the ſweet plants of our own growth; the ſaccharine part ſeparating when the tincture is ſet in the cold, while the reſinous or other matter extracted from the plant, remains diſſolved in the ſpirit. Solutions of ſugar mingle uniformly with thoſe of other ſaline ſubſtances, whether acid, alkaline, or neutral; and make no viſible alteration in the infuſions of the coloured flowers of vegetables, or other liquors, in which acids or alkalies produce a change of colour or a precipitation. This ſweet ſaline ſubſtance appears on all trials completely neutral *(a); and unites with moſt kinds of humid bodies, without altering their native qualities: it ſerves as an intermedium for uniting together ſome bodies naturally repugnant, as diſtilled oils and water. On the ſame principle it impedes the coagulation of milk, and the ſeparation of its butyraceous part.

Sugar, in conſequence of this property, is ſuppoſed to unite the unctuous part of the food with the animal juices. Hence ſome have concluded, that it increaſes corpulence or fatneſs; others, that it has a contrary effect, by preventing the ſeparation of the oily matter, which forms fat, from the blood; and others, that it renders the juices thicker and more ſluggiſh, retards the circulation, obſtructs the natural ſecretions, and thus occaſions or aggravates ſcorbutic, cachectic, hypochondriacal and other diſorders. General experience, however, has not ſhewn, that ſugar produces any of theſe effects in any remarkable degree: its moderate uſe appears to be innocent; and perhaps, of all that have yet been diſcovered, it is the moſt univerſally innocent and inoffenſive, as well as the moſt ſimple, ſweet.

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*(a) An acid of a peculiar kind has been ſeparated from it in ſmall proportion and by a laborious proceſs, in which the nitrous acid is employed as the ſeparating medium.

Sugar preſerves both animal and vegetable ſubſtances from putrefaction, and appears to poſſeſs this power in a higher degree than the common alimentary ſalt: I have ſeen animal fleſh preſerved by it untainted for upwards of three years. From this property it has been ſometimes applied externally as a balſamic and antiſeptic.

The impure brown ſugars, by virtue of their oily or treacly matter, prove emollient and gently laxative. The cryſtals or candy are moſt difficult of ſolution, and hence are propereſt where this ſoft lubricating ſweet is wanted to diſſolve ſlowly in the mouth, as in tickling coughs and hoarſeneſs. The uſes of ſugar in medicinal compoſitions, whether for their preſervation, for procuring the intended form and conſiſtence, or for reconciling to the ſtomach and palate ſubſtances of themſelves diſguſtful, are too obvious to require being enlarged on.

SAGAPENUM.

SAGAPENUM Pharm. Lond. & Edinb. Serapinum quibuſdam. SAGAPENUM: the concrete gummy-reſinous juice of an oriental plant, of which we have no certain account, but which appears, from the ſeeds and pieces of ſtalks ſometimes found among the juice as brought to us, to be of the ferulaceous or umbelliferous kind. The ſagapenum comes immediately from Alexandria; either in diſtinct tears, or run together into large maſſes; outwardly of a yellow colour, internally ſomewhat paler and clear like horn; growing ſoft on being handled, ſo as to ſtick to the fingers. It is ſometimes ſupplied in the ſhops by the larger and darker coloured maſſes of bdellium broken in pieces; which greatly reſemble it in appearance, but may be diſtinguiſhed by their much weaker ſmell.

Sagapenum has a ſtrong diſagreeable ſmell, ſomewhat of the leek kind, or like that of a mixture of galbanum with a little aſafetida; and a moderately hot biting taſte. It is one of the ſtrongeſt of the deobſtruent gums, and frequently preſcribed, either by itſelf, or in conjunction with ammoniacum or galbanum, in hyſteric caſes, uterine obſtructions, aſthmas, and other diſorders. It may be commodiouſly taken in the form of pills, from two or three grains to a ſcruple or half a dram: in doſes of a dram, it looſens the belly.

On boiling this gummy-reſin in water, about three-fourths of it are reſolved into a turbid yellowiſh white liquor, which ſmells and taſtes weakly of the ſagapenum. Rectified ſpirit ſcarcely takes up above one half, and receives very little colour: the ſolution ſmells weakly, and taſtes pretty ſtrongly. Both the watery and ſpirituous ſolutions loſe much, in evaporation, of their taſte as well as their ſmell; the watery loſes moſt, the extract being very conſiderably weaker than the ſagapenum in ſubſtance. It is probable that the more active parts are carried off by the watery vapour, but that in the ſpirituous extract they are only inviſcated by the groſſer reſinous matter: for the water, collected by diſtillation, is notably impregnated with the flavour of the ſagapenum, and diſcovers likewiſe a ſmall portion of eſſential oil; whereas the diſtilled ſpirit is almoſt flavourleſs.

SALES ALKALINI.

ALKALIES, or Alkaline salts: ſubſtances of a very pungent taſte; diſſoluble in cold water; changing the colours of the blue flowers of vegetables to a green; deſtroying the acidity of ſour liquors, and forming with the acid a neutral compound; precipitating earthy bodies diſſolved in acids*(a)*; producing no precipitation or turbidneſs in ſolutions

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(a) To this character of alkalicity there is one exception or limitation. Volatile alkaline ſpirits made completely cauſtic by quicklime, on being mixed with a ſolution of calcareous earth in the nitrous or marine acids, occaſion no precipitation or cloudineſs. If the mixture be expoſed for ſome time to the air, the alkaline ſpirit gradually loſes its cauſticity; and then precipitates the earth: on blowing into it air from the lungs, through a glaſs pipe, the precipitation began immediately.

lutions of the lixivial ſalts of vegetables. Theſe lixivial ſalts are themſelves alkalies: and to mingle uniformly with theſe bodies of their own kind, in a liquid ſtate, is the moſt commodious and ſure mark I can recollect, for diſtinguiſhing alkalies, univerſally, from certain ſolutions of earthy bodies in acids; ſome of which have, in a greater or leſs degree, all the common characters of alkalicity; but on being examined by this criterion, readily betray their compoſition, by rendering the limpid lixivial liquor milky, and depoſiting their earth; the acid, which before held the earth diſſolved, being abſorbed from it by the lixivial ſalt.

1. Sal alkalinus fixus. Fixt alkaline or lixivial ſalt: obtained from the aſhes of vegetables, by macerating or boiling them in water, and afterwards evaporating the lye till the ſalt remains dry. It is fixt and fuſible in the fire *(a), deliquiates in a moiſt air, diſſolves in equal its weight or leſs of water, and does not aſſume a cryſtalline form (b).

Fixt alkaline ſalts have an acrid fiery taſte, and leave in the mouth a kind of urinous flavour. Saturated ſolutions of them in water corrode the ſolid parts of animals, diſſolve fats and oils into ſaponaceous compounds, and liquefy almoſt all the animal humours, except perhaps only milk, which, when heated, they coagulate. Diluted largely with water, and drank warm in bed, they generally excite ſweat: if that evacuation is not favoured by external warmth, they operate chiefly by urine, of which, in many caſes, as in maniacal and hydropic ones, they frequently procure a copious and ſalutary diſcharge: they likewiſe looſen the belly, and in coſtive habits, where the direct purgatives or laxatives give only temporary relief, they render the benefit more laſting. They ſeem in general to act by ſtimulating and deterging the ſolids, and reſolving the

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*(a) If in fuſion a coal falls in, the alkali is reſolved into denſe white fumes, which act prodigiouſly on the brain and nervous ſyſtem, rendering the head weak and benumbed, as in convaleſcence from ſome great diſeaſe, occaſioning impatience and inquietude in every member. *Beaumé.*

(b) Though theſe ſalts, as commonly prepared, are never found to ſhoot into cryſtals, they do cryſtallize in part when ſolutions of them have been expoſed for a length of time to the open air. The cryſtals are far milder in taſte, and effervefce more ſtrongly with acids, than the alkali in its common ſtate.

viſcidities of the humours; and by theſe means opening obſtructions, or promoting ſecretion, in all the organs through which they paſs. The doſe is from two or three grains to fifteen or twenty; in ſome caſes, it has been extended to a dram. That they may be given, and continued for ſome time, with ſafety, in very conſiderable doſes, appears from the experience of thoſe, who have taken the ſtrong ſolution of them called ſoap-lyes for the relief of calculous complaints. In putrid diſorders, and a colliquated ſtate of the humours, theſe ſalts have been generally, and I think juſtly, condemned: for though they have lately been diſcovered to reſiſt putrefaction both in the fluids and ſolids of dead animals, yet in living ones they apparently increaſe the colliquation, with which all putrid diſeaſes are accompanied.

Fixt alkaline ſalts are obtainable, in greater or leſs quantity, from almoſt all vegetables; excepting perhaps only a few of the volatile acrid kind, as muſtard ſeed. The ſalts of different plants, in the ſtate wherein they are firſt extracted from the aſhes, are found to differ in degree of ſtrength, and in ſome other reſpects, from one another; many of them containing a portion, and ſome a very conſiderable one, of neutral ſalts of the vitriolic or marine kind(a). Purified by calcination, ſo as that all remains of the oil of the vegetable may be burnt out; and by deliquiation in the air, by which only the alkali diſſolves; they are all, except thoſe of ſome marine plants (ſee *Natron)*, ſo much alike, as not to be diſtinguiſhable, by any known method of trial, from one another.

(a) The readieſt way of diſcovering neutral ſalt in the lixivial ſalts of vegetables is, by ſhaking a ſtrong ſolution of them in a vial with about an equal quantity of rectified ſpirit of wine. If the ſalt is purely alkaline, the two liquors, on ſtanding for a moment, will ſeparate from one another; the ſpirit riſing to the top, and the alkaline ſolution collecting itſelf at the bottom, both of them tranſparent as at firſt. If neutral ſalts are mixed with the alkali, though in very ſmall proportion, the ſpirit produces inſtantly an opake milkineſs in the lye; and on ſtanding for a few minutes, a ſaline matter ſeparates and falls to the bottom, in greater or leſs quantity, according as the alkali has a greater or leſs admixture of the neutral ſalt.

The exact quantity of pure alkali in any kind of lixivial ſalt or potaſh may be determined by means of acids. Some alkaline ſalt known to be pure, as good ſalt of tartar, is to be melted in an iron ladle, that all remains of watery moiſture may be expelled: a certain quantity of this ſalt, as a dram, weighed out while warm, is to be diſſolved in a little water, and ſaturated with any convenient acid, as diluted ſpirit of ſalt: the point of ſaturation is readily and accurately obtained by means of ſtained paper, as directed in page 19. For the greater facility in trials of this kind, a quantity of the ſpirit of ſalt may be ſo diluted, that ſixteen drams of it for inſtance may exactly ſaturate the one dram of pure alkali. If then a ſolution of one dram of any given ſalt be ſaturated with the ſame acid liquor, ſo many drams or parts of a dram of the acid as are required for the ſaturation, ſo many ſixteenths or parts of ſixteenths of pure alkali does the given ſalt contain. This appears to be the moſt ſimple and commodious, as well as the moſt accurate way, that has yet been contrived, for determining the alkalicity, or degree of purity, of all kinds of lixivial ſalts.

The ſalts of the leaves and other herbaceous parts of plants are more difficultly brought to a ſtate of perfect purity than thoſe of the more woody and compact; a portion of oily matter being tenaciouſly retained, minute indeed, yet ſufficient to give a browniſh tinge. A ſalt of this kind is generally prepared, or expected to be prepared, from wormwood †, ſometimes from broom, and ſometimes from bean ſtalks, all which are ſufficiently well adapted to this uſe, their aſhes yielding as large a proportion as moſt of the common herbaceous matters, and their ſalt ſeeming to be almoſt merely alkaline, or free from any conſiderable quantity of the other kinds of ſaline matter, of which the aſhes of ſome vegetables contain more than they do of alkaline ſalt. About London, the ſhops are uſually ſupplied from the country with the aſhes of wormwood ready burnt; but that more of the oil may be conſumed than the ſimple burning of the herb has diſſipated, they are further calcined with a red heat, and occaſionally ſtirred, for ſome hours: the white aſhes are then boiled in water, and the filtered lye evaporated to dryneſs.

† Sal abſinth. *Pharm. Lond.*

Some have endeavoured to retain in the ſalt as much as poſſible of the oil, by burning the plant with a cloſe ſmothering heat, continued no longer than till it is reduced fully to aſhes; that is, till the alkaline ſalt is generated, for theſe ſalts do not appear to exiſt naturally in vegetables. The alkalies thus prepared are of a dark brown colour, and ſuppoſed to be much milder and leſs acrimonious, and more of a ſaponaceous nature, than thoſe which have been further diveſted of oil. But as we now have, in the ſoda or natron, an alkali as mild as can be wiſhed for, this inelegant, precarious and unfrugal method of ſuppreſſing the acrimony of the common alkalies, becomes unneceſſary.

Among all the known vegetables, or vegetable productions, there are none from which a pure alkaline ſalt is obtainable ſo eaſily, and in ſo large a quantity, as from tartar. If red or white tartar be burnt with a moderately ſtrong fire, either in a proper veſſel, or wrapped up in wetted brown paper, to prevent the ſmaller pieces from dropping down through the interſtices of the coals on being firſt injected into the furnace, it ſoon turns to white aſhes, which yield on the firſt elixation a ſtrong

† Sal tartari *Ph. L. & Ed.*

ſtrong fiery ſalt†, of a ſnowy whiteneſs, amounting to about one fourth the weight of the tartar. The ſtrength of the ſalt is ſomewhat further increaſed, by keeping it melted for ſome hours in an intenſe fire; in which operation, if the crucible cracks or is left uncovered, ſo as that the flame may have any acceſs to the ſalt, or if a minute portion of any inflammable matter is introduced, it aſſumes, in part at leaſt, a greeniſh or blue colour, which is commonly looked upon as a mark of its ſtrength. —A pure and ſtrong alkaline ſolution is obtained, by expoſing to the air, in a moiſt place, either the ſalt, or the white aſhes‡ of tartar: the alkali imbibes in a few days ſo much of the aereal moiſture, as to run wholly into a liquor, leaving, how highly ſoever the ſalt has been purified before, a conſiderable quantity of earthy matter. If the liquor be inſpiſſated to dryneſs, and the dry ſalt again deliquiated in the air or diſſolved in pure water, an earthy matter is ſtill left: and even if the filtered ſolution be kept for a length of time in a cloſe ſtopt glaſs veſſel, an earthy ſubſtance gradually ſeparates and falls to the bottom.

‡ Lixivium tartari *Ph. L.*

Alkaline ſalts are prepared for common uſes, in the way of trade, chiefly from wood; of which, in the foreſts of Germany, Ruſſia, and Sweden, large piles are burnt on purpoſe. To ſave the trouble of boiling down the lye, the finer part of the aſhes unelixated is in ſome places tempered with it into the conſiſtence of mortar, which is afterwards ſtratified with ſome of the more inflammable kinds of wood, and burnt a ſecond time: in others, the lye is ſoaked up in dry ſtraw, and this drained and burnt. The impure ſaline maſſes, obtained by theſe or ſimilar methods, are called *Potaſhes*; the ſtrongeſt of which has been generally reckoned that brought from Ruſſia (*Cineres ruſſici Ph. Lond.*) in dark-coloured hard maſſes, of a very pungent taſte, yet containing ſo much earthy matter as not readily to liquefy or grow moiſt in the air. This potaſh is ſaid to be prepared in the firſt of the ways above mentioned: but it appears from ſome late experiments, that another ingredient is made uſe of in the proceſs; the maſſes, as brought to us, being found to contain more quicklime than alkaline ſalt (a), and on this depends the great ſtrength and corroſiveneſs of the Ruſſia potaſh. For a purer ſalt, the lye is boiled down in large iron veſſels; and the dark-coloured dry ſalt, which concretes into a hard cruſt on the ſides and bottom of the veſſel, is beaten off with a mallet and chiſel, and calcined in an oven, with a gradual fire, till it becomes white; in which ſtate it is called, from its pearly appearance, *pearl-aſh*. For ſome years paſt, we have been ſupplied chiefly from our American colonies, with compact alkaline maſſes, much more pure than the above *pot-aſhes*, though leſs ſo than the *pearl-aſh*; prepared by boiling down the lye to dryneſs, and then increaſing the fire till the ſalt becomes red hot, and melts, ſo as to be conveniently laded out with iron ladles: the troubleſome operation of getting off the indurated ſalt from the boiler is thus avoided; and the ſtrong melting heat, though of ſhort continuance, ſupplies in great meaſure the tedious calcination of the ſalt; for though the inflammable matter, on which the colour depends, is in fuſion not conſumed, it is burnt to an indiſſoluble coaly ſtate, ſo that lyes made from theſe melted potaſhes with water are nearly as colourleſs as thoſe of the whiteſt pearl-aſhes. * The college of Edinburgh, which has diſcarded the oily alkalies of wormwood, broom, &c. now directs a pure incinerated alkali to be made from pearl-aſhes, firſt burned with a red heat in a crucible, then diſſolved in water, cleared by ſubſidence, and evaporated to dryneſs in an iron pot. This ſalt will diſſolve in equal its weight in water, and the ſolution is analogous to the former *oleum tartari per deliquium*.

(a) See Dr. Home's *Experiments on bleaching.*—It has been ſuſpected that the matter in Ruſſia potaſh, which ſeemed from Dr. Home's experiments to be quicklime, is no other than the earth of the vegetable aſhes themſelves, which earth, by ſtrong calcination, ſuch as this kind of potaſh is ſaid to undergo, aſſumes ſome of the moſt ſtriking characters of true quicklime. Since the eſtabliſhment

Sal alkalinus fixus vegetabilis purificatus *Ph. Ed.*

Quicklime remarkably increaſes the activity of all theſe ſalts; enabling them, in a liquid or dilute form, to diſſolve oils, fats, *&c.* far more powerfully than either the lime or alkali by themſelves; and in a ſolid or more concentrated one, to act as cauſtics. For theſe purpoſes, the

eſtabliſhment of the American manufacture, the Ruſſia ſort has in this country fallen ſo much into diſuſe, that it is very difficult to procure a ſpecimen that can be depended on as genuine. What has been ſent to me as true Ruſſia potaſh (and which indeed has greatly the appearance of what uſed to be ſold under that name) on being elixated with water, leaves a large quantity of earthy matter, greateſt part of which diſſolves readily in aquafortis. This ſolution has exactly the ſame taſte with a ſolution of chalk made in the ſame acid: on dropping into it a little vitriolic acid, the liquor grows inſtantly milky, and a copious precipitation enſues. This precipitability by the vitriolic acid is one of the properties of calcareous earths, which the earth of vegetables has not been found to acquire by any degree of calcination; and therefore we may conclude that in the making of this potaſh real quicklime is mixed, in very large proportion.

London college directs equal parts of quicklime and Ruſſia potaſh(a) to be gradually ſprinkled with ſo much water as will ſlake the lime: more water is then added, the whole ſtirred together, and ſuffered to ſtand for a day or two. The liquor, poured off clear from the undiſſolved lime, is the common ſoap lye; and is directed to be made of ſuch a ſtrength, that an exact wine pint may weigh juſt ſixteen ounces troy: if it is heavier, for every dram that it exceeds this weight, an ounce and a half of water by meaſure is to be added to each pint of the liquor: if lighter, it is to be boiled till the like quantity is waſted, or poured upon freſh lime and potaſh. The common lyes of our ſoft-ſoap makers are conſiderably ſtronger than this: Dr. Pemberton obſerves, that their lyes will be reduced to the ſtrength here propoſed, by diluting them with ſomewhat leſs than an equal meaſure of water. * In the Edinburgh pharmacopœia this preparation is thus directed. Eight ounces of freſh quicklime are put into an iron or earthen veſſel with twenty-eight ounces of warm water. When the ebullition is over, ſix ounces of pure vegetable fixt alkali are added, and after perfect mixture, the veſſel is covered and ſuffered to cool. The matter is then poured into a glaſs funnel, lined with a linen rag, and is ſet to drain into a glaſs bottle as long as any liquor will run. Some more water is then to be poured to the matter in the funnel, which will drain through it; and this is to be repeated till three pounds of liquor are procured, which is to be ſhaken together, and kept in a well ſtopped phial.

Lixivium ſaponarium *Pharm. Lond.*

Lixivium cauſticum *Phar. Edinb.*

The dry ſalt obtained by evaporating theſe lyes is a ſtrong and ſudden cauſtic: for the greater convenience of uſing, it is urged in a crucible with a ſtrong fire, till it flows like oil, then poured upon a flat plate made hot, and whilſt the matter continues ſoft, cut into pieces of a proper ſize and figure, which are kept in a glaſs veſſel cloſely ſtopt. It deliquiates much ſooner in the air, and diſſolves more readily in watery liquors, than the milder alkalies, and in this conſiſts its principal inconvenience; being apt to liquefy ſo much upon the part to which it is applied, as to ſpread beyond the limits in which it is intended to operate.

Cauſticum commune acerrimum *Phar. Edinb.*

(a) Pure alkaline ſalt requires commonly about twice its weight of quicklime to render it completely cauſtic. Complete cauſticity is known by the lye making no effervеſcence with acids. A redundance of lime is known, by the lye growing milky on dropping into it a little common alkaline lye, or on blowing into it with the breath through a glaſs pipe.

This inconvenience is avoided, by boiling down the ſoap lye only to one third† or fourth‡ part, and then, while the liquor continues boiling, ſprinkling in, by little and little, ſo much powdered quicklime as will abſorb it ſo as to form a kind of paſte: the addition of the lime in ſubſtance renders the preparation leſs apt to liquefy, and hence more eaſily confinable within the intended limits, but at the ſame time proportionably more ſlow in its operation.

2. Sal alkalinus volatilis. Volatile alkaline ſalt: obtainable, by diſtillation with a ſtrong fire, from all animal matters, from ſoot, and in ſmall quantity from moſt vegetables: producible alſo in animal ſubſtances, very plentifully in urine, by putrefaction, and in this caſe ſeparable by diſtillation with a gentle heat. When the ſalt is once formed, whether by ignition or putrefaction, it gradually exhales in moderately warm air; and riſes ſooner in diſtillation than highly-rectified vinous ſpirits, condenſing about the ſides of the recipient into cryſtalline concretions. It requires for its ſolution three or four times its weight of water.

Theſe ſalts are in ſmell as well as taſte very penetrating and pungent: they are the only concrete ſalts that in their pure ſtate emit ſenſible effluvia. They diſſolve oils, reſins, fats, *&c.* more languidly than the fixt alkalies, on account perhaps of their not being ſuſceptible of any conſiderable heat, by which their menſtrual power might be promoted. In the bodies of animals, they operate more powerfully than the fixt, both as reſolvents and ſtimulants; are more diſpoſed to direct their force to the cutaneous pores, and leſs to the groſſer emunctories; and act more remarkably upon the nervous ſyſtem. They are particularly uſeful in lethargic and apoplectic caſes; in hyſterical and hypochondriacal diſorders, and the languors, headachs, inflations of the ſtomach, flatulent colics, and other ſymptoms attending thoſe diſtempers, eſpecially in aged perſons and thoſe of a phlegmatic habit: in languors and faintings, their ſtimulating ſmell gives oftentimes immediate relief. In ſome kinds of fevers, particularly thoſe of the low kind, accompanied with a cough, hoarſeneſs, redundance of phlegm, and lentor of the blood, they are of great utility; liquefying the thick juices, raiſing the pulſe, and exciting a ſalutary diaphoreſis. In putrid fevers, ſcurvies, and wherever the maſs of blood is thin and acrimonious, they are hurtful: for though they powerfully

† Cauſticum commune mitius *P. E.*

‡ Cauſticum comm. fort. *Pharm. Lond.*

powerfully reſiſt the putrefaction of animal ſubſtances, that are detached from the vital œconomy, yet, in living animals, one of their primary effects is a colliquation of the humours, which in its advanced ſtate is very nearly allied to the advanced ſtate of putrefactive colliquation: their immoderate uſe has brought on high ſcorbutic ſymptoms, reſembling thoſe of the true putrid ſcurvy (a). Theſe ſalts are moſt commodiouſly taken in a liquid form, largely diluted; or in that of a bolus, which ſhould be made up only as wanted, the ſalt ſoon flying off. The doſe is from two or three grains to ten, twelve, or more.

The volatile alkalies obtained from different ſubſtances appear, like the fixt, to be, in their ſtate of perfect purity, one and the ſame thing. But as firſt diſtilled from the ſubject, they are largely impregnated with its oil rendered fetid or empyreumatic by the proceſs in which the ſalt was generated; and as theſe oils differ from one another in degree of ſubtility and fetidneſs, the ſalts partake of the ſame differences, till repeated diſtillations or other proceſſes have either ſeparated the adhering oils, or ſubtilized and purified them to the ſame degree. By repeated diſtillations, all animal oils become limpid as water, loſe their fetor, acquire a penetrating fragrant ſmell, and a gratefully pungent taſte: thus rectified, they are ſaid, by Dippelius, Hoffman, and others, to act, in doſes of half a drop, as diaphoretics, anodynes, and antiſpaſmodics. The volatile alkalies uſed in medicine are expected to be either pure from oil, or to have their oil in this ſubtilized ſtate.

Oleum animale *vulgo.*

The oily volatile alkalies have been chiefly prepared from hartſhorn, by diſtillation in large iron pots, with a fire increaſed by degrees to a ſtrong red heat. At firſt there ariſes an aqueous liquor, then the volatile ſalt, along with a yellowiſh and at length a dark reddiſh oil: if the aqueous liquor is not removed before the ſalt begins to come over, a part of the ſalt diſſolves in it, and thus forms what is called ſpirit.

The oil, excepting ſo much of it as is incorporated with the alkali, may be ſeparated from the ſpirit by filtration through wetted paper, which tranſmits the ſpirit and retains the oil. The ſalt and ſpirit are then diſtilled again together, with a very gentle heat, in a glaſs retort; and the diſtillation carefully repeated ſeveral times, till the ſalt becomes exceedingly white, and the ſpirit limpid as water, and of a grateful

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(a) *See* Huxham's *Diſſertation on the malignant ſore throat.*

Spiritus & ſal cornu cervi *Pharm. Lond.*

ſmell. The ſalt becomes the ſooner pure, if it be ſeparated from the ſpirit, and ſublimed firſt from an equal weight of pure chalk and afterwards from a little rectified ſpirit of wine. If the whole of the volatile ſalt is required in a ſolid form, it may be recovered from the ſpirit by ſublimation in a tall narrow cucurbit, the ſalt riſing into the head, while the watery fluid remains behind. In all the diſtillations of the ſpirit, greateſt part of the ſalt comes over before the phlegm; and the proceſs ſhould be continued no longer than till ſo much of the phlegm has followed as is nearly ſufficient to diſſolve it; that a part of the ſalt remaining undiſſolved may be a criterion, to the purchaſer, of the ſaturation or ſtrength of the ſpirit.—A ſpirit, ſalt, and oil, are ſometimes diſtilled in the ſame manner from wood ſoot, but here more labour is required to render the ſalt and ſpirit pure.

Spirit. ſal & ol. fuliginis *Pharm. Lond.*

Though the whiteneſs and limpidity which the ſalts and ſpirits of hartſhorn, ſoot, and other like ſubſtances, acquire by the above methods of purification, ſeem to ſhew that they are diveſted of oil; they are nevertheleſs found to participate ſtill of that principle in no ſmall degree. In long keeping they contract a yellow colour, and at length become again nauſeous and fetid; the oil ſeeming to be more and more extricated, or to loſe by degrees of the ſubtility and gratefulneſs which it received from the rectification. The oftener the diſtillation is repeated, the more permanent is the ſubtilization of the oil.

The moſt effectual purification of theſe ſalts is obtained, by combining them with mineral acids, and afterwards ſeparating the acid. It is not needful to make ſuch a combination on purpoſe: for ſuch a one is produced more compendiouſly, in the way of trade, and called in the ſhops ſal ammoniac: ſee the following article.

If ſal ammoniac be mingled with any fixt alkaline ſalt, either in the form of powder or ſolution, its acid will be abſorbed by the fixt alkali; and the volatile alkali, thus ſet at liberty again, will immediately diſcover itſelf by its pungent odour, and may be collected perfectly pure by diſtillation. Eighteen ounces of fixt alkali, and one pound of ſal ammoniac, may be diſtilled with four pints of water in a gentle heat, till two pints are drawn off †; or ſixteen ounces each of the two ſalts may be diſtilled with two pounds of water, to dryneſs ‡. The volatile alkaline ſalt may be extricated likewiſe by means of chalk, but with this difference, that the chalk does not begin to act upon the ſal ammoniac, or abſorb its acid, till

Spirit. ſal. ammoniac.

† *Ph. Lond.*

‡ *Ph. Edinb.*

Sal vol. ſal ammon. *P.L.* Alcali volatile ex ſale ammon. *vulgo* ſal ammon. volat. *Phar. Edinb.*

till the mixture is conſiderably heated: one part of the ſal ammoniac may be mixed with two of chalk, and the mixture ſet to ſublime in a retort with a ſtrong fire.

Spirit. volatil. cauſticus. *vulgo* ſp. ſal amm. cum calce viv.

Alcali volat. cauſt. *Ph. Ed.*

Quicklime, which heightens the pungency of fixt alkalies even to cauſticity, has a like effect upon the volatile: it renders the fixt more eaſily liquefiable, and the volatile permanently liquid, preventing their concretion into a ſolid form: the volatile alkali, like the fixt, in having its activity thus increaſed by quicklime, loſes its power of efferveſcing with acids; from whence it may be preſumed, that the lime acts, on one alkali as on the other, by abſorbing their air (ſee page 176). This pungent volatile ſpirit may be prepared, by ſlaking about a pound and a half of quicklime in four pints of water, and adding to the mixture, in a retort, a pound of powdered ſal ammoniac: immediately adapt a recipient, (for the pungent vapours begin to ariſe on the firſt contact) and with a gentle heat draw off two pints. *Or two pounds of quicklime may be ſlaked with one pound of water, and covered till it falls to a powder, which is then to be put in a retort with ſixteen ounces of ſal ammoniac diſſolved in four times its weight of water. The veſſels are to be very carefully luted, and with a very gentle heat twenty ounces are to be drawn off. This ſpirit is held too acrimonious for internal uſe, and has therefore been chiefly employed in ſmelling-bottles. It is an excellent menſtruum for certain vegetable ſubſtances, as Peruvian bark, which the milder ſpirits extract little from; and when ſaturated with bodies of this kind, its pungency is ſo far ſheathed, that it may be taken inwardly with as great ſafety as tinctures made in the other ſpirits. In long keeping, unleſs the bottle is quite full and very cloſely ſecured, it gradually imbibes air, as appears from the efferveſcence which it raiſes with acids; and loſes proportionably of its pungency.

Some have mixed a quantity of this cauſtic ſpirit with the officinal ſpirits both of ſal ammoniac and of hartſhorn; which thus become more pungent, ſo as to bear an addition of a conſiderable proportion of water without danger of diſcovery from the taſte or ſmell. This abuſe may be detected, by adding to the ſuſpected ſpirit a quantity of ſpirit of wine; which, if the volatile ſpirit is genuine, will precipitate a part of its volatile ſalt, but has no ſuch effect either on the cauſtic ſpirit itſelf, or on ſuch as is ſophiſticated with it.

Some have ſubſtituted to the ſpirit a ſolution of ſal ammoniac and fixt alkaline ſalt: this liquor eludes the above method of trial, as it depoſites a ſaline matter on the addition of ſpirit of wine, in the ſame manner as the genuine volatile ſpirit: it may be diſtinguiſhed by the matter, thus depoſited, being not volatile but fixt; or by a fixt ſalt being left upon evaporating a little of the liquor; or more compendiouſly, by adding a drop or two of ſolution of ſilver made in aquafortis, which immediately produces a milkineſs in the counterfeit, but makes no apparent change in the genuine ſpirit.

The addition of ſpirit of wine to volatile alkaline ſpirit affords means of judging, in ſome degree, of their ſtrength or ſaturation as well as of their purity. If the volatile ſpirit be fully ſaturated with ſalt, a quantity of highly-rectified ſpirit of wine, poured on it ſlowly down the ſides of the glaſs, in a cool place, produces immediately an opake denſe coagulum on the ſurface where the liquors touch: on ſhaking them together, the whole becomes a conſiſtent maſs, which ſoon reſolves by warmth into a fluid and a ſolid part. This is ſuppoſed by ſome to be a volatile ſoap, compoſed of the alkaline ſalt of the one ſpirit and the oily principle of the other; though in effect it is no more than the alkaline ſalt itſelf diſlodged, by the vinous ſpirit, from the watery fluid in which it was diſſolved: the quantity of ſalt, thus ſeparated, will be in proportion to the ſtrength of the volatile ſpirit. Offa alba Helmontii.

Though volatile alkalies, not cauſtic, appear from the above experiments to be averſe to any union with vinous ſpirits; a ſolution of them even in rectified ſpirit is nevertheleſs obtainable, by adding it, along with water, in the proceſs by which they are extricated from the ſal ammoniac. For this purpoſe, three pints of proof ſpirit are put to four ounces of ſal ammoniac, and ſix (or leſs) of any fixt alkaline ſalt, and one half of the liquor drawn off with a gentle heat†. Or ſixteen ounces of quicklime and eight of ſal ammoniac are powdered together, and put into a retort with thirty-two ounces of rectified ſpirit, and the diſtillation continued till all the ſpirit is come over‡. This preparation has lately come into eſteem both as a medicine and a menſtruum.

† Spirit. ſalis ammon. dulc. *Ph. L.*

‡ Spiritus ſal. ammon. vinoſus *Ph. Ed.*

Mixtures of volatile and vinous ſpirits, flavoured with different aromatic oils and other like materials, have long been in general uſe under the name of *ſal-volatile*. The college of London orders a quart of the above dulcified ſpirit, two drams of eſſential oil of nutmegs, the ſame quantity

Spir. volat. aromatic. *Pharm. Lond.*

Spirit. volat. aromat. *vulgo* Spir. volat. oleos. & Spir. ſalinus aromat. *P. E.*

Spir. volat. fœtid.

† *Ph. Lond.*

‡ *Ph. Edinb.*

quantity of eſſence of lemons, and half a dram of oil of cloves, to be diſtilled together with a very gentle heat: that of Edinburgh directs a dram and a half of oil of roſemary, and a dram of eſſence of lemons, to be diſſolved in eight ounces of the dulcified ſpirit. Volatile ſpirits are impregnated alſo in the ſhops with aſafetida, in the proportion of four ounces to five pints †, or one ounce to ſixteen ounces ‡.

Theſe kinds of compoſitions may be made extemporaneouſly, by dropping any proper eſſential oils into the dulcified ſpirit of ſal ammoniac, (as now directed above by the Edinburgh college) which will readily diſſolve them without the aſſiſtance of diſtillation. By this method, a ſal-volatile may be occaſionally prepared, of any particular flavour, or adapted to particular purpoſes: thus, in hyſterical diſorders, where the uterine purgations are deficient, a preparation of this kind, made with the oils of rue or ſavin, proves an uſeful remedy: in weakneſs of the ſtomach, oil of mint may be uſed; and in flatulent caſes, thoſe of aniſeeds or ſweet fennel ſeeds: theſe laſt remarkably cover the pungency of the volatile ſpirit, and render it ſupportable to the palate. The doſe of theſe compounds is from a few drops to ſixty or more.

The cauſtic ſpirit made with quicklime appears in ſome caſes preferable, for theſe kinds of compoſitions, to the other volatile ſpirits; as being perfectly miſcible with rectified ſpirit of wine, in any proportions, without any ſeparation of its volatile alkaline part; and as being a more powerful menſtruum for ſome difficultly ſoluble oils. The very penetrating pungent volatile ſpirit, which has lately come into vogue under the name of *eau de luce*, is ſaid to be made with this cauſtic ſpirit, and oil of amber that has been rectified or rediſtilled till it becomes limpid and loſes its ſmell: thirty-ſix drops of the oil, ſo rectified, are directed to be diſſolved in half an ounce of rectified ſpirit of wine, and ſix ounces of the cauſtic ſpirit added gradually to this ſolution: the mixture generally appears milky, and if required limpid may be rendered ſo by diſtillation: ſome tinge it of a fine blue colour, when deſigned only for ſmelling to, by adding a drop or two of ſolution of copper *(a)*.

(a) Malouin, *Chimie medicinale*, i. 202. ii. 431.

SAL AMMONIACUS.

SAL AMMONIACUS Pharm. Lond. & Edinb. SAL AMMONIAC: a neutral ſalt; volatile in a moderate heat, but not in that of boiling water; formed by the coalition of volatile alkaline ſalt with marine acid. On mixing it with a fixt alkaline ſalt or calcareous earth, and expoſing the mixture to the fire, its ingredients are diſunited: the volatile alkali exhales, and may be collected in proper veſſels (ſee the foregoing article): and the acid remains combined with the fixt alkali or earth, forming therewith the ſame compounds as if the pure marine acid had been poured upon them. Hence, in the preceding operations, where the volatile alkali of the ſal ammoniac is ſeparated by the intervention of fixt alkalies, the reſiduum, diſſolved and cryſtallized, is found to be the ſame with *regenerated ſea ſalt*; and when chalk or lime is uſed for the intermedium, the reſiduum affords *calcareous marine ſalt*: ſee *Sal communis*.

The other mineral acids form likewiſe ammoniacal ſalts with volatile alkali; and it is ſaid, that one made with the vitriolic acid is often ſubſtituted to the true officinal one with the marine.—The moſt obvious character of ammoniacal ſalts in general is, their yielding a pungent urinous odour on being ground with a little quicklime. The *marine* ſal ammoniac may be diſtinguiſhed from thoſe made with the other acids, by its emitting white fumes on dropping upon it ſome oil of vitriol; and by a ſolution of it in purified aquafortis being able to diſſolve gold leaf or a mark made with gold on a touchſtone. The *nitrous* ſal ammoniac is diſtinguiſhed, by its deflagrating or flaming when thrown into a red-hot veſſel, diſſolving in ſpirit of wine, and yielding red fumes with oil of vitriol. The *vitriolic* is diſtinguiſhed by a ſolution of it rendering ſolution of chalk in aquafortis milky; and by its not being acted upon by oil of vitriol.

SAL AMMONIAC has been hitherto prepared chiefly in Egypt: it is ſaid, that the earth abounds there with marine ſalt; that graſs and other vegetables are ſenſibly impregnated with this ſalt; that the dung of graminivorous quadrupeds is uſed as fuel, and the ſoot carefully collected; and that from this ſoot, ſal ammoniac is extracted, by ſublimation without addition. The ſalt is brought to us, ſometimes in conical loaves, moſt commonly in large round cakes, convex on one ſide and concave on the other, appearing when broken of a needled texture, or compoſed of ſtriæ running tranſverſely and parallel to one another: the internal part is generally pure, and of an almoſt tranſparent whiteneſs; the outſide for the moſt part foul and of a yellowiſh grey or blackiſh hue. It is purified, either by ſublimation, with a gradual fire, in an earthen cucurbit having a blindhead adapted to it; or, perhaps more perfectly, by ſolution in water, filtration, and cryſtallization †. It diſſolves, in temperately warm weather, in about thrice its weight of water, and by the aſſiſtance of heat in a much ſmaller quantity; and cryſtallizes into long ſhining ſpicula, or thin fibrous plates like feathers. In ſublimation, eſpecially if the fire is haſtily raiſed, it remarkably volatilizes many kinds of bodies, perhaps all thoſe that are ſoluble by the marine acid.

† Sal amm. purificat. *Phar. Lond.*

This ſalt has a very ſharp penetrating taſte. It is a powerful attenuant and deobſtruent, ſeeming to liquefy the animal juices almoſt like alkaline ſalts: Boerhaave obſerves that its liberal and continued uſe renders the blood ſo thin as to burſt through the veſſels, particularly thoſe of the lungs and the urinary organs. In doſes of half a dram or a dram, diſſolved in water, if the patient is kept warm, it generally proves ſudorific: by moderate exerciſe, or walking in the open air, its action is determined to the kidneys: in larger doſes it looſens the belly. It has by ſome been held a ſecret for the cure of intermittents; and is undoubtedly, in many caſes, as an aperient, an excellent aſſiſtant to the Peruvian-bark, where that aſtringent drug by itſelf would produce dangerous obſtructions, or aggravate thoſe already formed. This ſalt is employed likewiſe externally as an antiſeptic, and in lotions and fomentations for œdematous tumours; as alſo in gargariſms, for inflammations of the tonſils, and for attenuating and diſſolving thick mucus in the mouth and fauces. Saturated ſolutions of it are ſaid to conſume warts.

SAL CATHARTICUS.

PURGING SALT: a ſalt of a bitter taſte; ſoluble in twice its weight or leſs of water, and ſhooting into long priſmatic cryſtals like thoſe of nitre; liquefying and bubbling up in a moderate heat, emitting a large quantity of aqueous vapours, and changing to a white ſpongy maſs, bitterer than the ſalt at firſt. It is of two kinds; one a combination of the vitriolic acid with the earth called *magneſia*; the other, a combination of the ſame acid with the fixt alkali called *natron*. The moſt obvious criterion of their acid being the vitriolic is, their precipitating chalk diſſolved in aquafortis or in other acids.

1. SAL CATHARTICUS AMARUS *Pharm. Lond. & Edinb. Nitrum calcareum Liſtero & hydrologis quibuſdam.* Purging bitter ſalt: compoſed of the vitriolic acid and magneſia; diſtinguiſhable from that whoſe baſis is an alkali, by ſolutions of it being turned milky, and depoſiting their earth, on the addition of any alkaline ſalt.

This is the ſalt with which the purging mineral waters are principally impregnated, and on which their purgative quality depends. It was firſt extracted from the Epſom waters, and has been commonly diſtinguiſhed, both in this and other countries, by the name of Epſom ſalt: but thoſe waters yielding the ſalt very ſparingly, and their quantity being inſufficient for its great demand, it was ſought for elſewhere, and found, in plenty, in the bitter liquor remaining after the cryſtallization of common ſalt from ſea water; from which it is now generally prepared.

This ſalt is a gentle purgative, operating in general with eaſe and ſafety, yet with ſufficient efficacy, and quickly finiſhing its operation: its paſſing off haſtily, and not extending its action ſo far as moſt other purgatives, ſeems to be its principal imperfection. For a full doſe, eight or ten drams may be diſſolved in a proper quantity of common water, or four or five drams in a pint or quart of the purging waters; to which may be added a little tincture of cardamom ſeeds, or ſome other grateful aromatic, to render the liquor more acceptable to the ſtomach. Theſe liquors, in ſmaller doſes, paſs further into the habit, promote the ſecretions in general, and prove excellent aperients in ſundry chronical diſorders.

2. SAL CATHARTICUS GLAUBERI, *vulgo ſal mirabile.* Glauber's cathartic ſalt: compoſed of the vitriolic acid and the mineral alkali *natron*, and hence ſuffering no change from an admixture of freſh alkali.

This ſalt was diſcovered, by the chemiſt whoſe name it bears, in extracting the acid ſpirit of ſea ſalt by means of the vitriolic acid. When oil of vitriol is poured on ſea ſalt, the marine acid, thereby diſengaged from its own alkaline baſis, begins immediately to exhale, and by applying heat may be totally expelled; the vitriolic acid remaining combined

Sal cathart. glauberi †*Ph. Lond.* Soda vitriolata *vulgo* ſal cath. glauberi ‡*Pharm. Edinb.*

with the natron or marine alkali. This combination is ſtill procured chiefly in the ſame manner: to the ſea ſalt is added equal † or half ‡ its weight of oil of vitriol diluted with water, and the marine acid being diſtilled off, the reſiduum is diſſolved and cryſtallized. The ſmalleſt of theſe proportions of oil of vitriol appears to be ſufficient for expelling the acid and ſaturating the alkali of the ſea ſalt; but the larger, or rather perhaps one between the two, is more eligible, as the Glauber's ſalt does not well cryſtallize unleſs the acid prevails in the ſolution.

This ſalt is nearly of the ſame medicinal qualities with the foregoing, which frequently ſupplies its place in the ſhops. The Glauber's ſalt, ſomewhat the leaſt unpleaſant to the taſte, is ſuppoſed to be the mildeſt of the two, and to operate the moſt kindly.

SAL COMMUNIS.

COMMON or CULINARY SALT; called, from its moſt obvious ſource, ſea ſalt; though found alſo, in immenſe quantities, in the bowels of the earth. It is a perfectly neutral ſalt, compoſed of a peculiar acid denominated from it the *marine acid*, and of the mineral alkali *natron*. It diſſolves in leſs than thrice its weight of boiling water, and does not, like the other neutral ſalts, concrete again in the cold, ſo long as the evaporation of the fluid is prevented; cold water diſſolving nearly as much of this ſalt as boiling water. By gentle continued evaporation it ſhoots into cubical cryſtals, ſeveral of which unite together into the form of hollow truncated pyramids. The cryſtals, expoſed to the fire, burſt and crackle ‡, ſoon after melt, and appear thin and limpid as water: if the ſalt be melted along with other fuſible ſalts or with vitreous matters, it does not perfectly unite with them, but flows in part diſtinct upon the ſurface. After ſuffering a conſiderable heat, it liquefies in the air.

‡ Sal decrepitatum.

1. SAL GEMMÆ *Pharm. Lond.* Sal gem, rock ſalt, foſſil common ſalt. This is met with in ſeveral parts of the world, but in greateſt plenty in certain deep mines, of prodigious extent, near Cracow in Poland: ſome is likewiſe found in England, particularly in Cheſhire. It is for the moſt part very hard; ſometimes pure, tranſparent and colourleſs; more commonly mixed with earthy or ſtony matters, of an opake whiteneſs, or of a red, green, blue, or other colours. Theſe

laſt ſorts are purified, for the common uſes of ſalt, by ſolution and cryſtallization.

2. Sal marinus *Pharm. Lond.* *Sal marinus hiſpanus Pharm. Edinb.* The ſalt extracted from ſea water and ſaline ſprings. Sea waters yield from one fiftieth to about one thirtieth their weight of pure ſalt: from ſeveral ſprings much larger quantities are obtained: thoſe in our own country at Nantwich, Northwich, and Droitwich, afford from one ſixth to one third their weight. Sea water contains, beſides the common ſalt, a portion of purging bitter ſalt, and of another ſaline ſubſtance which remains diſſolved after the cryſtallization of the latter, of a very pungent taſte, ſcarce reducible into a cryſtalline form, compoſed of marine acid and calcareous earth: from both theſe ſalts the ſpring waters are uſually free. There are two general methods of extracting the common ſalt from theſe natural ſolutions of it: the one, a haſty evaporation, continued till the ſalt concretes and falls in grains to the bottom of the pan, from whence it is afterwards raked out, and ſet to drain from the bittern: the other, a ſlow and gradual evaporation, effected in the warmer climates by the ſun's heat, by which the ſalt is formed, not into ſmall grains, but into large cryſtals, called bay-ſalt. The ſalts obtained by theſe two proceſſes differ in ſome reſpects from one another: that got by haſty evaporation, eſpecially if a boiling heat, or one approaching to it, be continued during the time of the ſalts concreting, is apt to liquefy in a moiſt air; an inconvenience which the cryſtallized ſort is not ſubject to: the cryſtals are found likewiſe to be ſtronger than the other, and to anſwer better for preſerving proviſions. Both ſorts prove impure and brown-coloured if the ſolutions are evaporated directly, but of perfect whiteneſs if previouſly clarified by boiling with a little ox blood, or other like ſubſtances, which concreting by the heat, inviſcate the unctuous matter, and carry it to the ſurface in form of ſcum. Both ſorts generally retain a portion of the bitter ſalt; whoſe baſis being an earth, ſolutions of them depoſite this earth on the addition of any alkali.

Common ſalt differs from other ſaline ſubſtances in occaſioning drought, and tending, not to cool, but rather to heat the body. It prevents putrefaction leſs than moſt others, and in ſmall quantities, ſuch as are taken with food, promotes it: by this quality it probably promotes alſo the reſolution of the aliment in the ſtomach, at the ſame time that it proves a mild ſtimulus to that viſcus itſelf. Salted animal foods are generally, perhaps juſtly, accounted one of the principal cauſes of the ſcurvy at ſea; not that the ſalt is of itſelf prejudicial, but on account of its being incapable of preſerving the animal ſubjects, for a length of time, in a perfectly uncorrupted ſtate. Pure ſea ſalt, and ſea water, are rather ſalubrious than hurtful, both in the true ſcurvy, and in impurities of the blood and humours in general. In conſiderable doſes, they act as purgatives: Hoffman obſerves, that an ounce of the ſalt, diſſolved in a proper quantity of water, occaſions commonly ſix ſtools or more, without uneaſineſs; that this ſalt checks the operation of emetics, and carries them off by ſtool; that in glyſters it is more effectual, though uſed only in the quantity of a dram, than any of the purgatives; and that where other glyſters fail of opening the belly, a ſolution of common ſalt takes place.

* A remarkable inſtance of the efficacy of common ſalt given in very large doſes in a worm caſe, is related in the *Medical Tranſactions of the London College*, Vol. I. A perſon reduced to the utmoſt extremity with pain in the ſtomach, obſtinate conſtipation, and contracted limbs, was adviſed, after many remedies had been uſed in vain, to drink ſalt and water. He drank within an hour two pounds of ſalt mixed in two quarts of water. It occaſioned violent vomiting, which brought up a quantity of ſmall worms, and its operation ended with purging and a profuſe ſweat. Great rawneſs and ſoreneſs of the gullet and ſtomach, with unquenchable thirſt, and dyſury, remained. Theſe ſymptoms went off by free dilution; and he ventured the third day after to repeat the doſe of ſalt, which had effects ſimilar to the former. A perfect cure was the conſequence of this ſingular practice.

THE common ſorts of ſea ſalt, contrary to other neutral ones, part with a little of their acid in the boiling down of ſolutions of them to dryneſs *(a)*. To this cauſe are attributed the weakneſs of the ſalt pre-

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(a) This acid appears to proceed, not from the pure marine ſalt, but from the calcareous muriatic ſalt, or a combination of marine acid with earth, which all the common ſorts of ſea ſalt are found to partake of. On dropping into a ſolution of common ſea ſalt a little alkaline lye, the earth precipitates; and the acid, being thus ſaturated with alkali, is no longer diſpoſed to evaporate on boiling down the liquor.

pared by that proceſs, and its diſpoſition to deliquiate in the air; both which imperfections are ſaid to be corrected by a ſmall addition of freſh acid when the ſalt begins to concrete. Hence alſo diſtilled ſea water is manifeſtly impregnated with acid, ſo as to be unfit for drinking or for the common purpoſes of life; unleſs a little chalk, vegetable aſhes, or other like ſubſtances, be added in the diſtillation, to abſorb and keep down the acid extricated by the heat *(a): by this means the diſtilled fluid proves perfectly ſweet.

The acid of ſea ſalt is completely diſengaged from its alkaline baſis by the more powerful acid of vitriol; and may now be collected, in a concentrated ſtate, by diſtillation; but as, in this concentrated ſtate, its fumes very difficultly condenſe, a little water is commonly added to promote that effect. On two pounds of dry ſea ſalt, the college of London directs two pounds of oil of vitriol diluted with a pint of water, that of Edinburgh one pound of oil of vitriol diluted with equal its quantity of warm water, to be poured by little and little, under a chimney, that the operator may not be incommoded by the noxious fumes: the retort is placed in ſand, and the diſtillation performed with a fire gradually increaſed till nothing more will ariſe. The ſpirit may be freed from its ſuperfluous water, by a ſecond diſtillation in a glaſs cucurbit; the phlegmatic part riſing in a proper degree of heat, while the ſtronger acid remains behind. The diſtilled ſpirit proves nearly the ſame, whether the larger or ſmaller of the above proportions of oil of vitriol are uſed, the difference affecting chiefly the reſiduum: ſee the foregoing article.

Spirit. ſalis marini. *Ph. Lond.*

Acidum muriaticum *vulgo* ſpir. ſal marin. *Ph. Edinb.*

The marine acid is diſtinguiſhed from the others, by its riſing in white fumes; by its peculiar pungent ſmell; by its enabling the nitrous acid to diſſolve gold, preventing its diſſolving ſilver, and precipitating ſilver previouſly diſſolved, but producing no precipitation in ſolutions of calcareous earths. It is ſometimes given, from ten to ſixty or ſeventy drops, properly diluted, as an antiphlogiſtic, diuretic, and for promoting appetite, and applied externally to chilblains, which are ſaid by Linnæus to be radically cured by it in a ſhort time, without fear of a return; but its principal uſe is in combination with other bodies.

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*(a) This aſſertion is contradicted by the ſucceſs of ſome late attempts to ſupply ſhips with freſh water by the diſtillation of ſea water. In theſe, good ſweet water was obtained merely by fitting an apparatus to the ſhips' boilers in which ſalt water was uſed for common purpoſes. See, particularly, *Phipp*'s *Voyage towards the North Pole*.

Combined with volatile alkalies, it produces the officinal ſal ammoniac. With the mineral fixt alkali, it regenerates common ſalt. With vegetable fixt alkalies, it forms a neutral ſalt of a ſharper taſte, and ſomewhat more difficult of fuſion and ſolution, than common ſalt: this combination is prepared in the ſhops, by dropping into the marine ſpirit a lixivium of the fixt alkali till all effervеſcence ceaſes, and then evaporating the mixture to dryneſs: the ſame ſalt may be obtained from the matter which remains after the diſtillation of ſpirit of ſal ammoniac with fixt alkali.

Spirit. ſalis marini coag. *Ph. Lond. & Wirtem.* Sal marin. regeneratus *vulgo.*

Sal ammon. fixum *vulgo.* Sal muriatic. calcareus.

With calcareous earths, it forms a very pungent ſaline compound, which difficultly aſſumes a cryſtalline form, deliquiates in the air, diſſolves not only in water but in rectified ſpirit of wine, and changes the colour of blue flowers of vegetables to a green. This ſalt is contained, in conſiderable quantity, in ſea water, and remains fluid after the cryſtallization of its other ſaline matters: it is found alſo in ſundry common waters, to which, like the calcareous nitre, it communicates, according to its quantity, a greater or leſs degree of hardneſs and indiſpoſition to putrefy: it is far more antiſeptic than the perfect marine ſalt. It is ſaid to be diuretic and lithontriptic: the medicine commonly ſold as a lithontriptic under the name of *liquid-ſhell*, appears to be no other than a combination of this kind, conſiſting of calcined ſhells diſſolved in marine acid. Theſe combinations have been chiefly prepared, by mixing the calcareous earth with ſal ammoniac, and urging the mixture with a gradual fire, till the volatile alkali of the ſal ammoniac is either diſſipated in the air or collected by diſtillation, and only its acid left incorporated with the earth: ſo much of the earth, as is ſatiated with the acid, may be ſeparated from the reſt by elixation with water.

This acid diſſolves, among metallic bodies, zinc and iron pretty readily; copper and tin languidly; biſmuth and arſenic very difficultly and ſparingly; lead, mercury, regulus of antimony, and ſilver, not at all, unleſs highly concentrated and applied in the form of fume: it diſſolves, by digeſtion, all metallic bodies when reduced to a ſtate of calx, gold not excepted. Though it difficultly unites with metals, it adheres to moſt of them more ſtrongly than any other acid, and in part volatilizes them: it renders them likewiſe more fuſible in the fire than the other acids do, and more diſpoſed to ſolution in ſpirit of wine.

Of itſelf it is nevertheleſs the moſt averſe of all acids to a perfect union with vinous ſpirits. If poured gradually into thrice its quantity of rectified ſpirit of wine, and the mixture, after digeſtion for ſome days, ſubmitted to diſtillation in a ſand heat; the ſpirit that comes over, appears to be little other than the acid ſimply diluted with the vinous ſpirit; whereas, when the nitrous or vitriolic acids are treated in the ſame manner, a new compound is formed by the intimate coalition of the acid ſpirit with the inflammable *(a)*. The dulcified marine acid has by ſome been held in great eſteem againſt weakneſs of the ſtomach, indigeſtion, and other like complaints brought on by irregularities.

SALIX.

SALIX Pharm. Edinb. Salix vulgaris alba arboreſcens C. B. Salix Ger. Salix fragilis Linn. COMMON WHITE WILLOW: a pretty large tree, frequent in moiſt woods and hedges; producing looſe ſpikes or catkins, either of imperfect barren flowers, or of ſeeds incloſed in down: it is the largeſt of the willows; and differs from the others, in the oblong pointed ſerrated leaves being hoary on both ſides, though moſt ſo on the lower, and in the branches not being tough.

THE bark of this tree has lately been found an uſeful medicine in agues, of which many perſons have been cured by taking a dram of the powdered bark every four hours during the intermiſſions, though in ſome caſes it was neceſſary to join to it a little Peruvian bark (ſee the *Philoſophical Tranſactions* for the year 1763). To the taſte this bark diſcovers a pretty ſtrong bitterneſs and aſtringency: with ſolution of chalybeate vitriol, it ſtrikes an inky blackneſs. Theſe obſervations ſerve therefore to confirm what has been remarked under the head of the Peruvian bark, that in the diſtempers where that valuable medicine takes place, other bitters and aſtringents are likewiſe uſeful, though in an inferiour degree. The aſtringency of the willow bark is extracted both by water and ſpirit; and

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(a) It is ſaid that the marine acid may be combined with vinous ſpirits as intimately as the others, and an ethereal fluid produced from the mixture, by applying the acid ſpirit to the vinous while both are reſolved by fire into vapour; or more commodiouſly, by uſing the acid in a high degree of concentration, ſuch as is obtained by diſtillation from a mixture of mercury ſublimate with tin, commonly called the *ſmoking ſpirit of Libavius,* and proceeding with this ſpirit and ſpirit of wine, in the ſame manner as with the other acids. It is ſuppoſed that this acid, in diſtillation from metallic ſubſtances, takes up a portion of the inflammable principle of the metal, which promotes its union with the vinous ſpirit.

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the black matter, produced by adding vitriol to the watery infuſion, is not diſpoſed to precipitate.

SALVIA.

SAGE: a low ſhrubby plant, with ſquare ſtalks; obtuſe wrinkled dry leaves ſet in pairs, and large blueiſh labiated flowers, in looſe ſpikes on the tops of the branches: the upper lip of the flower is nipt at the extremity, the lower divided into three ſegments. It is a native of the ſouthern parts of Europe, common in our gardens, and flowers in June.

1. SALVIA *Pharm. Lond. & Edinb. Salvia major C. B. Salvia officinalis Linn.* Common ſage: with the leaves nearly oval, but acuminated, ſometimes green and ſometimes red: both the green and red ſorts riſe from the ſeeds of one and the ſame plant.

2. SALVIA HORTENSIS MINOR. *Salvia minor aurita & non aurita C. B.* Small ſage, or ſage of virtue: with narrower leaves, generally whitiſh, never red: moſt of them have at the bottom a piece ſtanding out at each ſide in the form of ears. This is a variety of the former.

THE leaves and tops of ſage are moderately aromatic and corroborant, and uſed in debilities and relaxations both of the nervous and vaſcular ſyſtem. Their ſmell is pretty ſtrong and not diſagreeable; their taſte ſomewhat warm, bitteriſh, and ſubaſtringent: with ſolution of chalybeate vitriol, they ſtrike a deep black colour. The ſecond ſort is both in ſmell and taſte the ſtrongeſt, the firſt moſt agreeable. Of both kinds, the flowers are weaker and more grateful than the leaves; and the cup of the flower ſtronger, and obviouſly more reſinous, than any other part.

The leaves of ſage give out their virtue both to water and rectified ſpirit, moſt perfectly to the latter; to the former they impart a browniſh, to the latter a dark green tincture. The watery infuſion is often uſed as tea, and often acidulated with a little lemon juice for a diluent in febrile diſtempers: the ſpirituous tincture is in taſte ſtronger than the watery, but the ſmell of the ſage is by this menſtruum covered or ſuppreſſed. The leaves and flowery tops, diſtilled with water, yield a ſmall quantity of eſſential oil, ſmelling ſtrongly and agreeably of the herb, in taſte very warm and pungent, when newly diſtilled of a fine greeniſh colour, by age turning yellow or brown: the remaining decoction, diveſted of this aromatic and moſt active principle of the ſage, yields an extract weakly bitteriſh, ſubaſtringent, and ſubſaline. The ſpirituous extract, in ſmell weak and ſomewhat different in kind from that of the herb itſelf, diſcovers to the taſte a conſiderable aromatic warmth and pungency, reſembling that of camphor, but milder.

SAMBUCUS.

ELDER: a plant, with finely ſerrated ſharp-pointed leaves, ſet in pairs on a middle rib, with an odd one at the end; producing, on the tops of the branches, umbel-like cluſters of ſmall white flowers, followed each by a juicy berry, containing generally three ſeeds.

1. SAMBUCUS *Pharm. Lond. & Edinb. Sambucus fructu in umbella nigro C. B. Acte. Sambucus nigra Linn.* Elder tree: with nearly oval leaves, of which five or ſeven ſtand on one rib. It is a ſmall tree or ſhrub, covered with an aſh-coloured chapt bark, under which lies a thinner green one, and under this a white: it grows wild in hedges, flowers in May, and ripens its black berries in September.

The bark of this tree is recommended as a ſtrong hydragogue in hydropic caſes. Sydenham directs three handfuls of the inner bark to be boiled in a quart of milk and water till only a pint remains, of which one half is to be taken in the morning, and the other at night, and this repeated every day: he obſerves, that this medicine operates both upwards and downwards; and that if it does not vomit or purge at all, or but gently, it does no ſervice. Boerhaave ſays, that the expreſſed juice of the middle bark, given from a dram to half an ounce (ſome go as far as an ounce), is the beſt of hydragogues where the viſcera are ſound; and that it ſo powerfully diſſolves the humours, and procures ſo plentiful watery diſcharges from all the emunctories, that the patient is ready to faint from the large and ſudden inanition. The decoction and juice are recommended alſo, in ſmaller doſes, as uſeful aperients and deobſtruents in different chronical diſorders. This bark has ſcarcely any ſmell, and very little taſte: on firſt chewing, it impreſſes a kind of ſweetiſhneſs, which is followed by a very ſlight but very durable acrimony, in which its medical activity ſeems to reſide, and which it imparts both to watery and ſpirituous menſtrua.

The leaves, of a faint unpleaſant ſmell, and a ſtrong, very nauſeous, bitter kind of taſte, are ſaid to be purgative and emetic like the bark. They are celebrated externally againſt burns and inflammations, and for theſe purpoſes an ointment has been prepared for them in the ſhops: four ounces of the leaves, and the ſame quantity of the inner bark, freſh, were thoroughly bruiſed, and boiled in a quart of linſeed oil till the watery moiſture was conſumed and the oil tinged of a green colour: the oil was then preſſed out, and brought to the conſiſtence of an ointment by melting in it ſix ounces of white wax.

Unguentum ſambucinum *Pharm. Lond.*

The flowers of elder have an agreeable flavour, which they give over in diſtillation with water, and impart by infuſion both to water and rectified ſpirit: on diſtilling with water a large quantity of the flowers, a ſmall portion of a butyraceous eſſential oil ſeparates. Infuſions made from them while freſh are gently laxative and aperient: when dry, they are ſaid to promote chiefly the cuticular excretion, and to be particularly ſerviceable in eryſipelatous and eruptive diſorders. From theſe alſo an unguent is prepared, probably of equal efficacy with the other, and preferred by ſome as being more elegant, by melting three pounds of mutton ſuet with a pint of oil-olive, and boiling in this mixture four pounds of the full blown flowers till they are almoſt criſp.

Rob baccar. ſambuci
† *Ph. Lond.*
‡ *Ph. Edinb.*

The berries, in taſte ſweetiſh and not unpleaſant, yield on expreſſion a fine purpliſh juice, which inſpiſſated to the conſiſtence of honey, either by itſelf † or with the addition of half a pound of fine ſugar to two pounds and a half ‡, proves an uſeful aperient and reſolvent in recent colds and ſundry chronical diſorders, gently looſening the belly, and promoting urine and perſpiration.

2. Ebulus *Pharm. Edinb.*(a) *Sambucus humilis ſive ebulus C. B. Chamæacte. Sambucus Ebulus Linn.* Dwarf-elder or Danewort: an herbaceous plant, dying to the ground in winter; with longer leaves than thoſe of the elder tree, and nine leaves on one rib. It grows wild in ſome parts of England, flowers in July, and produces ripe black berries in the beginning of September.

(a) Expunged.

It is ſaid that this ſpecies has the ſame virtues with the preceding, but differs ſomewhat in degree: that the bark (that of the root has been chiefly uſed) and the berries, are reſpectively more efficacious, and the leaves leſs ſo: that the rob or inſpiſſated juice of the berries, in doſes of half an ounce to an ounce, acts as a ſtrong hydragogue, and in ſmaller doſes as a powerful reſolvent and deobſtruent.

SANGUIS DRACONIS.

SANGUIS DRACONIS Pharm. Lond. & Edinb. Cinnabaris Græcorum. DRAGONS-BLOOD, ſo called: a reſin, obtained from certain large palm-like trees *(Palmijuncus Draco Rumph. amb. Calamus Rotang Linn.)* growing in the Eaſt Indies; brought over in oval drops wrapt up in flag-leaves, or in large and generally more impure maſſes compoſed of ſmaller tears; of a deep dark red colour, which changes, in pulverization, to a crimſon. Sundry artificial compoſitions, coloured with the true dragons-blood, or with brazil wood or other materials, have been ſometimes ſold in the room of this commodity: ſome of theſe diſſolve like gums in water, and others crackle in the fire without proving inflammable; whereas the genuine dragons-blood readily melts and catches flame, and is ſcarcely acted on by watery liquors. It diſſolves almoſt totally, by the aſſiſtance of heat, in rectified ſpirit, and tinges a large quantity of the menſtruum of a deep red colour: it is likewiſe ſoluble in expreſſed oils, and imparts to them a red tincture, leſs beautiful than that which anchuſa communicates.

THIS reſin, in ſubſtance, has no perceptible ſmell or taſte: when diſſolved, whether in vinous ſpirits or in oils, it diſcovers ſome degree of pungency and warmth. It is uſually looked upon as a gentle incraſſant, deſiccative, and reſtringent; and ſometimes preſcribed in theſe intentions againſt alvine and uterine fluxes, and ulcerations both internal and external.

SANICULA.

SANICULA ſeu Diapenſia Ph. Ed.(a) Sanicula officinarum C. B. Sanicula europæa Linn. SANICLE: an umbelliferous plant, with ſhining

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(a) Expunged.

dark green roundiſh leaves, cut into five ſegments, ſerrated about the edges; and rough ſeeds, which ſtick to the clothes. It is perennial and evergreen, grows wild in woods on hilly grounds, and flowers in May.

THIS herb, recommended both externally and internally as a vulnerary or mild reſtringent, and ſuppoſed to have received its name from the ſanative virtues aſcribed to it, diſcovers to the taſte a kind of bitteriſhneſs and roughneſs, followed by an impreſſion of acrimony which affects chiefly the throat: in the freſh leaves, the taſte is very weak; in the dry leaves, conſiderable; in the extracts made from them, by water and ſpirit, moderately ſtrong.

SANTALUM.

SAUNDERS. Three different woods are brought under this name from the Eaſt Indies, in large billets: they are ſaid to be the produce, chiefly, of the iſland Timor in the Indian ocean.

1. SANTALUM CITRINUM *Pharm. Edinb. Santalum album Linn.**(a) Yellow ſaunders: of a pale yellowiſh or browniſh colour, and a cloſe even grain. This wood has a pleaſant ſmell, and a bitteriſh aromatic taſte accompanied with an agreeable kind of pungency. Diſtilled with water, it yields a fragrant eſſential oil, which thickens in the cold into the conſiſtence of a balſam, approaching in ſmell to ambergris, or a mixture of ambergris and roſes: the remaining decoction, inſpiſſated to the conſiſtence of an extract, is bitteriſh and ſlightly pungent. Rectified ſpirit extracts, by digeſtion, conſiderably more than water: the colour of the tincture is a rich yellow. The ſpirit, diſtilled off, is lightly impregnated with the fine flavour of the wood: the remaining browniſh extract has a weak ſmell, and a moderate balſamic pungency. This wood therefore, though at preſent among us diſregarded, promiſes to have a good claim to the corroborant virtues aſcribed to it by Hoffman and others.

2. SANTALUM ALBUM. White ſaunders: of a cloſe texture and ſtraight fibres like the preceding, but of a paler whitiſh colour. This

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*(a) The Santalum album, below, is ſaid not to be a wood of a different ſpecies, but the *alburnum* of the trunk of the ſame tree, the medullary part of which is the citrinum.

ſpecies, far weaker than the yellow, both in ſmell and taſte, promiſes very little medicinal virtue: it has long been entirely neglected, and is now rarely to be met with in the ſhops.

3. SANTALUM RUBRUM *Pharm. Lond. & Edinb. Pterocarpus Santolinus Linn. Suppl.* Red ſaunders: of a dull red almoſt blackiſh colour on the outſide, and a deep brighter red within: its fibres are now and then curled, as in knots. This alſo, recommended as an aſtringent and corroborant, appears to be of very little virtue, as it has no manifeſt ſmell, and little or no taſte: even of extracts made from it, with water or with ſpirit, the taſte is inconſiderable. Its principal uſe is as a colouring drug. To watery liquors it communicates only a yellowiſh tinge, but to rectified ſpirit a fine deep red: a ſmall quantity of an extract made with this menſtruum tinges a large one of freſh ſpirit of the ſame elegant colour; though it does not, like moſt other reſinous bodies, diſſolve in expreſſed oils, or communicate its colour to them: of diſtilled oils, there are ſome, as that of lavender, which receive a red tincture both from the wood itſelf and from the reſinous extract, but the greater number does not.

Geoffroy and others take notice that the brazil woods are ſometimes ſubſtituted to red ſaunders, and the college of Bruſſels doubts whether all that is ſold among them for ſaunders is not really a wood of that kind. According to the account which they have given of their red ſaunders, it is plainly the brazil wood of the dyers; the diſtinguiſhing character of which is, that it imparts its colour to common water. Of the ſame kind alſo is the wood examined by Cartheuſer under the name of red ſaunders, the watery infuſion and extract of which were both of a dark red.

SANTONICUM.

SANTONICUM SEMEN Pharm. Edinb. Semen cinæ, ſemen ſanctum, ſemen contra, ſementina. WORMSEED: a ſmall light oval ſeed; compoſed as it were of a number of thin membranous coats; of a yellowiſh-greeniſh colour with a caſt of brown; eaſily friable, by rubbing between the fingers, into a fine chaffy kind of ſubſtance. The ſeeds have commonly mixed with them a conſiderable quantity of this chaffy matter, and ſmall bits of ſtalks and leaves. They are brought from the Levant, and ſuppoſed to be the produce of a ſpecies of *artemiſia*, reſembling in its general appearance our fine-leaved mugwort, called by Linnæus *Artemiſia (Santonicum) foliis caulinis linearibus pinnato-multifidis, ramis indiviſis, ſpicis ſecundis reflexis*; the *Artemiſia auſtriaca* of Jacquin.

These ſeeds have a moderately ſtrong, not agreeable ſmell, ſomewhat of the wormwood kind; and a very bitter ſubacrid taſte. They have been chiefly recommended as anthelmintics; and commonly taken, in this intention, either along with melaſſes, or candied with ſugar. They might be uſed alſo for other purpoſes; as they appear (at leaſt the ſpecimens which I examined) to be a not inelegant ſtrong bitter. They give out their virtue both to water and ſpirit, together with a browniſh hue, which in the watery tincture has an admixture of reddiſh, in the ſpirituous of yellow: the ſpirituous is leſs ungrateful in taſte, and diſcovers leſs alſo of the ill ſmell of the ſantonicum than the watery infuſion. In evaporation, water carries off greateſt part of the diſagreeable flavour of the ſeeds, the inſpiſſated extract being little other than ſimply bitter. An extract made by rectified ſpirit retains a conſiderable ſhare of the flavour: this extract appears to be the moſt eligible preparation of the ſantonicum for the purpoſes of an anthelmintic; and the watery extract, or a tincture drawn from it, for the more general intentions of bitter medicines.

SAPO.

SOAP: a compoſition of oils or fats with alkaline ſalts, incorporated ſo as to diſſolve together in water into a milky ſemitranſparent liquid.

Sapo amygdalinus *P. L.*

1. Sapo durus. Hard ſoap. The fineſt hard ſoap is prepared with freſh-drawn oil of almonds, by digeſting it with thrice its meaſure of the ſoap-lyes formerly deſcribed (ſee *Sales alcalini*) in ſuch a heat that they may juſt ſimmer. In a few hours they unite into a turbid fluid, which, on being boiled a little, becomes more tranſparent, and ropy, ſo that if a little be ſuffered to cool, it will concrete like gelly. Some ſea ſalt is now thrown in, till the boiling liquor loſes its ropineſs; and the coction continued till, on receiving ſome drops upon a tile, the ſoap is found to coagulate, and the water to freely ſeparate from it. The fire being then removed, the ſoap riſes gradually to the ſurface; from whence

it is taken off before it grows cold, and put into a wooden mould, or frame, with a cloth bottom: being afterwards ſeparated from the mould, it is ſet by till it has acquired a due conſiſtence. After the ſame manner a hard ſoap is made with oil-olive, which ſhould be of the fineſt kind, that the ſoap may prove as little ungrateful as poſſible either to the palate or ſtomach. By the ſame or ſimilar proceſſes this commodity is prepared for common uſes in the way of trade. The fineſt of the common ſoaps is that called Spaniſh or Caſtile ſoap, which is made with oil-olive, and the alkaline ſalt called ſoda or barilla: our ſoap-boilers find that this alkali gives a better conſiſtence, or greater hardneſs to the ſoap, than the other potaſhes or common vegetable alkalies.

Sapo ex oleo olivarum *Ph. Lond.*

Sapo durus *Phar. Lond. mat. med.*

Sapo albus hiſpanus *Ph. Edin. mat. med.*

Hard ſoap, triturated with vegetable reſins and thick balſams, incorporates with them into a compound, ſoluble, like the ſoap itſelf, in watery liquors: hence it proves an uſeful ingredient in reſinous pills, which of themſelves are apt to paſs entire through the inteſtines, but by the admixture of ſoap become diſſoluble in the ſtomach. It renders unctuous and thick mucous animal matters diſſoluble in like manner in aqueous fluids, and hence may be preſumed to act as a menſtruum for theſe kinds of ſubſtances in the body, that is to attenuate viſcid juices and reſolve obſtructions: ſuch, in effect, are the virtues which it appears to exert in cachectic, hydropic, and icteric caſes, in which laſt, particularly, its aperient and reſolvent powers have been often experienced. Solutions of it have been found likewiſe to diſſolve certain animal concretions of the harder kind, as the filaments which are ſometimes ſeen floating in the urine of rheumatic and arthritic perſons, the matter ſecreted in gouty joints, and the more compact urinary calculus: on theſe ſubſtances (at leaſt on the latter) though ſoap of itſelf acts more languidly than lime-water, yet when joined to that menſtruum it remarkably increaſes its activity, the diſſolving power of a compoſition of the two being, according to Dr. Whytt's experiments, conſiderably greater than that of the ſoap and lime-water unmixed: of the good effects of theſe medicines in calculous caſes there are ſeveral inſtances; but what their effects may be in gouty and rheumatic ones, is not yet well known.

The uſual doſe of ſoap, as an aperient, is half a dram or a dram: as a lithontriptic, half an ounce, or an ounce, or more, are taken in a day at proper intervals. It is given in the form of a bolus or pills; or made into an electuary with ſome grateful ſyrup, as that of orange peel; or diſſolved in milk or other liquids. *It is excellently covered by chocolate: two drams in a pint are not in the leaſt perceived; the chocolate is thought by ſome better than without it. A little ſoap is always added in the compoſition of chocolate, to make it froth.

In watery liquors it diſſolves only imperfectly, the ſolution being always turbid. Rectified ſpirit, though it has no action on the alkaline ſalt or oil ſeparately, diſſolves the ſoap into a limpid liquor. Proof ſpirit, free from acidity, diſſolves it as perfectly, and in much larger quantity; rectified ſpirit not taking up one tenth its own weight, but proof ſpirit one third or more. The ſpirituous ſolutions bear to be largely diluted with pure water, without ſuffering any turbidneſs or ſeparation of their parts: but on the addition of any acid, or of any combination of acids with earthy or metallic bodies, as the *ſal catharticus amarus*, &c. the ſoap is reſolved into its conſtituent ingredients; its alkaline ſalt being abſorbed by the acid, and the oil riſing to the ſurface. The oil, thus extricated from ſoap by acids, diſſolves like eſſential oils, in rectified ſpirit.

Soap is employed externally for diſcuſſing rheumatic pains, arthritic tumours, the humours ſtagnating after ſprains, *&c.* Some pretend that the indurated tophaceous concretions in arthritic joints have been reſolved by the external uſe of ſoapy cataplaſms. Several compoſitions for external purpoſes are prepared in the ſhops. One part of Spaniſh ſoap, ſhaved or cut in thin ſlices, is ſtirred into ſix parts of common plaſter melted over the fire, and the mixture boiled till it acquires the conſiſtence of a plaſter; which is formed into rolls whilſt hot, the ſoap diſpoſing it to grow brittle as it cools†: ſome endeavour to promote the reſolvent virtue of the ſoap, by adding to four parts of the common plaſter, two of gum plaſter, with one of ſoap‡. But ſoap acts to much better advantage in the form of a cataplaſm or liniment, than in the ſtiff one of a plaſter. The officinal ſaponaceous liniments are made, by digeſting three ounces of Spaniſh ſoap in a pint of ſpirit of roſemary till the ſpirit is ſaturated, and diſſolving in this ſolution an ounce of camphor||: or by digeſting two ounces of ſoap in a pint of rectified ſpirit of wine, and afterwards adding an ounce of camphor, and two drams of oil of roſemary§. Sometimes opium is joined, by which the compound is ſuppoſed to be rendered more effectual for allaying violent pains: half an ounce of opium is digeſted with the ſoap in the laſt mentioned compoſition. This is given alſo internally, in nervous colics, jaundices, *&c.*

Emplaſtrum † e ſapone *Phar. Lond.*

‡ ſaponaceum *Ph. Ed.*

Linimentum ſaponaceum || *Ph. Lond.*

vulgo Balſ. ſaponaceum § *Ph. Edin.*

Linimentum anodynum *vulgo* Balſ. anodyn. *Ph. Edinb.*

2. Sapo mollis. Soft ſoap. The common ſoft ſoap uſed about London, generally of a greeniſh hue with ſome white lumps, is prepared chiefly with tallow: a blackiſh ſort more common in ſome other places, is ſaid to be made with whale oil. Both kinds are conſiderably more acrid than the hard ſoaps, and are employed only for ſome external purpoſes: a mixture of equal parts of our common ſoft ſoap and quick-lime is uſed as a mild cauſtic †.

Sapo mollis *Pharm. Lond.*

† Cauſtic. com. mitius *Pharm. Lond.*

3. Sapo volatilis. Volatile ſoap. Of this there are three kinds: one compoſed of fixt alkalies and volatile oils; another, of volatile alkalies, and oils of the groſſer or more fixt kind; and the third, in which both the alkali and the oil are volatile.

Fixt alkalies are very difficultly made to unite with diſtilled oils. The moſt commodious method of obtaining the combination appears to be, by throwing the ſalt red hot into a heated mortar, immediately reducing it into powder, then pouring on it, while it continues quite hot, by little at a time, an equal quantity or more of the oil, and continuing to grind them together, ſo as to form a ſmooth ſoft maſs. Stahl reports that the union may ſoon be obtained alſo, by agitating the ſalt with a ſmall proportion of the oil, and a quantity of phlegmatic vinous ſpirit; the ſpirit ſeeming to ſerve as a medium for joining them together. This medicine, prepared with oil of turpentine, was formerly celebrated as a diuretic, in nephritic complaints, and as a corrector of certain vegetables, particularly of opium: its virtues have not been fully determined by experience, nor does the preſent practice pay any regard to it. Beaumé obſerves, that it conſiſts of only the reſinous part of the oil united with the alkali; that the more fluid and well rectified the oil is, the leſs ſoap is obtained; and that by adding a little turpentine in ſubſtance, the preparation is conſiderably expedited.

Sapo philoſophicus tartareus, &c.

Combinations of volatile alkalies with expreſſed oils, and with the oily balſamic juices, are obtained more readily. One ounce of ſpirit of ſal ammoniac, and four of oil of almonds, ſhaken together in a wide-mouthed vial, unite perfectly, in a ſhort time, into a white ſaponaceous liquid. A more conſiſtent ſoapy maſs is prepared, by gradually dropping the ſpirit into equal its weight of Venice turpentine, and ſtirring them carefully together. Both theſe compoſitions are very

Liniment. volatile *P. L.*

Epithema volat. *Ph. L.*

acrimonious, and are uſed only externally, as ſtimulants, in rheumatic and iſchiadic pains.

Combinations of volatile alkalies with volatile oils, in a liquid form, have been already mentioned under the head of *ſal alkalinus volatilis*: compoſitions of the ſame kind may be obtained in a ſolid ſtate, by mixing the ſalt with the oil, and ſubliming them together. It may be obſerved, that in all theſe combinations made with volatile ſalts, though the pungency of the ſalt is more or leſs covered, it is never completely ſheathed as that of the fixt alkalies is in the hard ſoaps; and that none of the compoſitions, in which either the alkali or the oil is volatile, are ſo perfectly ſaponaceous as thoſe in which they are both of the more fixt kind.

SAPONARIA.

SAPONARIA Pharm. Edinb. (a) *Saponaria major lævis C. B. Saponaria officinalis Linn.* Soapwort or Bruisewort: a ſmooth herb, with plantane-like three-ribbed leaves ſet in pairs on ſhort broad pedicles; producing, on the tops of the ſtalks, umbel-like cluſters of red, purple, or whitiſh flowers, cut deeply into five ſegments nipt at the ends, ſtanding in long cups, followed by pear-ſhaped capſules full of ſmall ſeeds: the root is long, ſlender, ſpreading to a great diſtance, ſo as ſcarce to be extirpated, of a browniſh colour on the outſide, internally white, with a yellowiſh fibre in the middle. It grows wild, but not very common, in moiſt grounds, and flowers in July.

The roots and leaves of ſaponaria diſcover to the taſte a kind of glutinous ſoftneſs or ſmoothneſs; accompanied, in the roots, with a ſweetiſhneſs and ſlight pungency; in the leaves, with a degree of bitterneſs and roughneſs. The ſmoothneſs or ſoapineſs, from which the plant received its name, is ſtrongeſt in the leaves; which, on being agitated with water, raiſe a ſlippery froth, and are ſaid to impart a detergent quality approaching to that of ſolutions of ſoap itſelf. This matter is diſſolved alſo by rectified ſpirit as well as water, and hence appears evidently of a different nature from gummy or mucilaginous ſubſtances:

(a) Expunged.

on inſpiſſating the ſolutions, it remains entire in the extracts, and proves ſtronger in the ſpirituous extract than in the watery. This plant therefore, among us diſregarded, may be preſumed to have ſome conſiderable medicinal virtues: by the German phyſicians, the roots are uſed in venereal maladies, and ſuppoſed to be ſimilar, but ſuperiour, to thoſe of ſarſaparilla. * A phyſician in Paris is ſaid lately to have given the inſpiſſated juice of this plant to the quantity of half an ounce in a day, to perſons labouring under a gonorrhœa, with ſucceſs.

SAPONARIÆ NUCULÆ.

NUCULÆ ſaponariæ non edules C. B. Saponariæ ſphærulæ arboris filicifoliæ J. B. Baccæ bermudenſes Marloe. Soap-berries: a ſpherical fruit, about the ſize of a cherry; whoſe cortical part is yellow, gloſſy, and ſo tranſparent, as to ſhew the ſpherical black nut, which rattles within, and which includes a white kernel. It is the produce of a ſmall tree, growing in Jamaica and other parts of the Weſt Indies, called by Sir Hans Sloane *prunifera racemoſa, folio alato, coſta media membranulis utrinque extantibus donata, fructu ſaponario*; by Linnæus, *Sapindus Saponaria.*

It is ſaid that this fruit, at leaſt its cortical part, has a very bitter taſte, and no ſmell: that it raiſes a ſoapy froth with water, and has ſimilar effects with ſoap in waſhing: that it is a medicine of ſingular and ſpecific virtue in chloroſes: and that a tincture or extract are preferable to the berry in ſubſtance, from whence it may be preſumed that its ſoapy matter, like that of the ſaponaria, is diſſoluble in ſpirit. Its medicinal virtue was firſt publiſhed by Marloe in a letter to Mr. Boyle; but the fruit having been concealed under the fictitious name of Bermudas berries, its uſe died with the author. That Marloe's Bermudas berries were the ſame with the ſoap-berries of America, had been ſuſpected by ſome, and was confirmed by Dale in examining the Bermudas berries which Marloe had left under that title behind him. They are ſtill, however, unknown in practice, and in the ſhops.

SARCOCOLLA.

SARCOCOLLA Pharm. Lond. A concrete gummy-reſinous juice, brought from Perſia and Arabia, in ſmall, ſpongy, crumbly, whitiſh-yellow grains, with a few of a reddiſh and ſometimes of a deep red colour mixed with them: the tears, when entire, are about the ſize of peas: the whiteſt tears or fragments are preferred, as being the freſheſt. The plant which produces this juice, and the place of its production, are unknown.

Sarcocolla has a bitteriſh ſubacrid taſte, followed by a nauſeous kind of ſweetiſhneſs. It ſoftens in the mouth, bubbles and catches flame from a candle, diſſolves almoſt wholly in water, and greateſt part of it in rectified ſpirit. Its medicinal qualities are not well known: it is ſaid, when taken internally, to act as a ſlow and dangerous purgative; externally, to cleanſe and promote the cicatrization of ulcers: diſſolved in breaſt-milk, to be an uſeful collyrium for defluxions on the eyes.

SARSAPARILLA.

SARSAPARILLA Pharm. Lond. & Edinb. Zarza quibuſdam: the root of a ſpecies of bindweed, *ſmilax aſpera peruviana ſive ſarſaparilla C. B. Smilax (ſarſaparilla) caule aculeato angulato, foliis inermibus retuſo-mucronatis Linn.* growing in the Spaniſh Weſt Indies, and ſcarcely bearing the winters of our climate without ſhelter. The root conſiſts of a number of ſtrings, of great length, about the thickneſs of a gooſe-quill or thicker, flexible, free from knots, compoſed of fibres running their whole length, ſo that they may be ſtript in pieces from one end to the other. They are covered with a thin, browniſh, or yellowiſh aſh-coloured ſkin, under which lies a thicker, white, friable ſubſtance, and in the middle runs a woody pith.

This root has a farinaceous ſomewhat bitteriſh taſte, and no ſmell. To water it communicates a reddiſh brown, to rectified ſpirit a yellowiſh red tincture, but gives no conſiderable taſte to either menſtruum. An extract, obtained by inſpiſſating the ſpirituous tincture, has a weak, ſomewhat nauſeous, balſamic bitteriſhneſs, which is followed by a ſlight but durable pungency: the watery extract is much weaker, and in larger quantity.

Sarſaparilla was firſt brought into Europe by the Spaniards, about the year 1563, with the character of a ſpecific for the cure of the lues venerea, which made its appearance a little before that time. Whatever good effects it might have produced in the warmer climates, it was found to be inſufficient in this, inſomuch that many have denied it to have any virtue at all, and ſuppoſed that it could do no more than, by its farinaceous ſoftneſs, to obtund the force of the gaſtric fluid, and thus weaken the appetite and digeſtion. It appears however, from experience, that though greatly unequal to the character which it bore at firſt, yet, in many caſes, ſtrong decoctions of it, drank plentifully and duly continued, are of very conſiderable ſervice, for promoting perſpiration, and what is called ſweetening or purifying the blood and humours. In the medical obſervations publiſhed by a ſociety of phyſicians in London, there are ſeveral inſtances of its efficacy in venereal maladies, as an aſſiſtant to mercury, or when mercury had preceded its uſe: it oftentimes anſwered, and that ſpeedily, after mercurial unctions, and long continued courſes of ſtrong decoctions of guaiacum, had failed. Three ounces of the root are boiled in three quarts of river water, till the liquor when ſtrained amounts to about one quart, which is taken at three or four doſes, either warm or cold, every twenty-four hours. Dr. Harris ſays, that infants who have received the infection from the nurſe, though full of puſtules and ulcers, and ſometimes troubled with nocturnal pains, are cured by ſarſaparilla without mercurials: he directs the powder of the root to be mixed with their food.

SASSAFRAS.

SASSAFRAS Ph. Lond. & Edinb. The root of a large American tree of the bay kind, *(laurus (ſaſſafras) foliis integris trilobiſque Linn. Arbor ex florida ficulneo folio C. B.)* brought over in long ſtraight pieces, very light and of a ſpongy texture, covered with a rough fungous bark, outwardly of an aſh-colour, inwardly of the colour of ruſty iron.

This root has a fragrant ſmell, and a ſweetiſh, ſubaſtringent, aromatic taſte: the bark is much ſtronger than the internal woody part, and the ſmall twigs than the larger pieces. It gives out its virtues, together with a reddiſh colour, totally to ſpirit, leſs perfectly to water: the ſpirituous tincture ſmells weakly and taſtes ſtrongly, the watery ſmells ſtronger and taſtes weaker of the root. Diſtilled with water, it yields a fragrant eſſential oil, of a penetrating pungent taſte, ſo ponderous as to ſink in water, limpid and colourleſs when newly diſtilled, by age growing yellowiſh and at length of a reddiſh brown colour: the remaining decoction, inſpiſſated, yields a bitteriſh ſubaſtringent extract. Rectified ſpirit, diſtilled from the tincture made in that menſtruum, brings over with it nothing conſiderable: the inſpiſſated extract retains, along with the bitterneſs and ſubaſtringency, nearly all the aromatic matter of the root, though the ſmell is in great part ſuppreſſed in the extract as well as in the tincture.

Ol. eſſentiale rad. ſaſſafr. *Ph. L. & Ed.*

Saſſafras is uſed as a mild corroborant, diaphoretic, and ſweetener, in ſcorbutic, venereal, cachectic, and catarrhal diſorders. For theſe purpoſes, both the volatile and the fixt parts, the diſtilled oil and the watery extract, have been given with ſucceſs: the ſpirituous tincture or extract, which contain both, appear to be the moſt elegant preparations. Infuſions made in water, from the cortical or the woody part raſped or ſhaved, are commonly drank as tea: in ſome conſtitutions, theſe liquors, by their fragrance, are apt, on firſt taking them, to affect the head; an inconvenience, which is generally got the better of on continuing their uſe for a little time, and which neither the watery nor ſpirituous extracts are at all ſubject to.

SATUREIA.

SATUREIA Pharm. Edinb.(a) *Satureia hortenſis ſive cunila ſativa plinii C. B. Thymbra. Satureia hortenſis Linn.* SUMMER SAVOURY: a low, ſhrubby, ſomewhat hairy plant: with ſmall oblong narrow leaves, narroweſt at the bottom, ſet in pairs; and ſmall cluſters, in the boſoms of the leaves, of pale purpliſh labiated flowers, whoſe upper lip is nipt at the extremity, the lower cut into three ſegments. It grows wild in ſome of the ſouthern parts of Europe, and is ſown annually in our culinary gardens.

(a) Expunged.

THE leaves of ſavoury are a warm aromatic; of a grateful ſmell, like that of thyme but milder; and a penetrating pungent taſte. To rectified ſpirit, they give out the whole of their active matter, together with a dark green tincture: water receives from them a reddiſh brown colour, and a conſiderable ſmell, but very little of their taſte. In diſtillation with water, they yield a ſmall quantity of a fragrant eſſential oil, very pungent, and of great ſubtility and volatility: the remaining decoction, inſpiſſated, leaves a weakly bitteriſh, ſubaſtringent, ungrateful extract. Rectified ſpirit elevates in diſtillation much leſs than might be expected from the remarkable volatility of the oil: the extract ſmells agreeably, though weakly, of the ſavoury, and has a very warm, pungent, aromatic taſte.

SATYRION.

SATYRION Pharm. Edinb. Orchis morio mas foliis maculatis C. B. Cynoſorchis & teſticulus caninus quibuſdam. Orchis maſcula Linn. ORCHIS: a plant with ſix or ſeven long ſmooth narrow leaves, variegated with dark-coloured ſtreaks or ſpots, iſſuing from the root; and one or two embracing the ſtalk, which is ſingle, roundiſh, and ſtriated: on its top appears a long looſe ſpike of irregular, naked, purpliſh red flowers, conſiſting each of ſix petala; one of which is large, cut into three ſections, hanging downwards; the others ſmaller, forming a kind of hood above it, with a tail behind: the root conſiſts of two roundiſh whitiſh tubercles, about the ſize of nutmegs, one plump and juicy, the other fungous and ſomewhat ſhrivelled, with a few large fibres at the top. It is perennial, grows wild in ſhady grounds and moiſt meadows, and flowers in the beginning of May or ſooner.

THE plump roots or bulbs (the only part directed for medicinal uſe) have a faint ſomewhat unpleaſant ſmell, and a viſcid ſweetiſh taſte. They abound with a glutinous ſlimy juice, in virtue of which they have been found ſerviceable, like althea root and other mucilaginous vegetables, in a thin acrid ſtate of the humours and eroſions of the inteſtines. They have been celebrated alſo for aphrodiſiac virtues, to which they appear to have little claim.

The ſubſtance brought from the eaſtern countries under the names of *Salep*, *ſalleb*, and *ſerapias*, and recommended, like our orchis root, in bilious dyſenteries, defluxions on the breaſt, and as a reſtorative, appears to be no other than the prepared roots of ſome plants of the orchis kind, of which different ſpecies are ſaid to be taken indiſcriminately. The ſalep comes over in oval pieces, of a yellowiſh white colour, ſomewhat clear and pellucid, very hard and almoſt horny, of little or no ſmell, in taſte like gum tragacanth. The common orchis root, boiled in water, freed from the ſkin, and afterwards ſuſpended in the air to dry, gains exactly the ſame appearance: the roots thus prepared do not grow moiſt or mouldy in wet weather, which thoſe, that have been barely dried, are very liable to: reduced into powder, they ſoften or diſſolve as it were in boiling water into a kind of mucilage; which may be diluted, for uſe, with a larger quantity of water, or with milk.

* The following proceſs for the preparation of ſalep from the Engliſh orchiſes, by Mr. Moult, of Rochdale, is publiſhed in the *Philoſ. Tranſact.* Vol. LIX. "The new root is to be waſhed in water, and the fine brown ſkin which covers it is to be ſeparated by means of a ſmall bruſh, or by dipping the root in hot water, and rubbing it with a coarſe linen cloth. When a ſufficient number of roots have been thus cleaned, they are to be ſpread on a tin plate, and placed in an oven heated to the uſual degree, where they are to remain ſix or ten minutes, in which time they will have loſt their milky whiteneſs, and acquired a tranſparency like horn, without any diminution of bulk. Being arrived at this ſtate, they are to be removed, in order to dry and harden in the air, which will require ſeveral days to effect; or by uſing a very gentle heat, they may be finiſhed in a few hours."

SAXIFRAGA.

SAXIFRAGA ALBA Pharm. Edinb.(a) *Saxifraga rotundifolia alba C. B. Saxifraga granulata Linn.* WHITE SAXIFRAGE: a plant with kidney-ſhaped crenated yellowiſh-green leaves, and round ſlender purpliſh branched ſtalks, on the tops of which grow ſhort looſe ſpikes of pentapetalous white flowers, followed each by a two-horned capſule full of ſmall ſeeds: the root is compoſed of ſmall fibres, with a number of little tubercles among them, about the ſize of pepper-corns, containing, under a chaffy covering, irregular whitiſh bodies ſomewhat brittle like the kernels of fruits. It is perennial, grows wild in ſandy paſture-grounds, and flowers in May: the leaves and ſtalks wither ſoon after flowering, and by degrees the tubercles of the roots alſo diſappear.

(a) Expunged.

The leaves of this plant, of little or no ſmell, and of a weak unpleaſant taſte; and the tubercles of the roots, improperly called ſeeds, of no ſmell, and in taſte ſweetiſh with a very ſlight acrimony; are recommended as aperients and diuretics, in obſtructions of the menſes, ſtranguries, and nephritic caſes. Among us, they have long been diſuſed, and unknown in the ſhops; a more common plant, of the ſame name, but of a different genus, and of more activity, having generally ſupplied their place, *viz.*

SAXIFRAGA VULGARIS.

SAXIFRAGA vulgaris ſive anglica, Hippomarathrum anglicum, Fœniculum erraticum: Seſeli pratenſe, ſilaus forte plinio C. B. Angelica pratenſis apii folio Tourn. Peucedanum Silaus Linn. English or Meadow saxifrage: an umbelliferous plant, with winged leaves ſubdivided into oblong narrow ſharp-pointed ſegments: the flowers are of a yellowiſh white colour, the umbel naked, but its ſubdiviſions have ſeveral little leaves at their origin; the ſeeds are ſhort, browniſh or reddiſh, plano-convex, with three deep furrows ſo as to appear winged: the root is long, about the thickneſs of the finger, browniſh or blackiſh on the outſide, and white within. It is perennial, common in meadows and paſture grounds, and flowers in June.

The roots, leaves, and ſeeds of this plant have been commended as aperients, diuretics, and carminatives; and appear, from their aromatic ſmell, and moderately warm pungent bitteriſh taſte, to have a better claim to theſe virtues than the preceding ſaxifrage. They are rarely or never uſed.

SCAMMONIUM.

SCAMMONIUM Pharm. Lond. & Edinb. Diagrydium. Scammony: the concrete gummy-reſinous juice of the roots of a ſpecies of convolvulus *(convolvulus (ſcammonia) foliis ſagittatis poſtice truncatis, pe-*

dunculis bifloris Linn.) diſtinguiſhed by the leaves being ſhaped like an arrow-head and having two ſemicircular notches at the bottom on each ſide of the footſtalk, the flowers being of a pale yellowiſh colour and ſtanding two on one ſtem: it is a native of Syria, and has been lately found to bear the colds of our own climate. The ſcammony is extracted in Syria, by baring the upper part of the root in June, cutting off the top obliquely, and placing a ſhell or ſome other receptacle at the depending part to receive the milky juice, which on ſtanding concretes into ſolid maſſes.

The beſt ſcammony is brought from Aleppo, in light ſpongy maſſes, eaſily friable, gloſſy, of different ſhades of colour from a grey or yellowiſh white almoſt to black, when reduced to powder of a browniſh white colour. An inferiour ſort comes from Smyrna, in compact hard ponderous pieces, full of ſand and other impurities. Such ſhould be choſen as crumbles the moſt eaſily betwixt the fingers, grows inſtantly white on the contact of watery moiſture, and leaves little or no feces on being diſſolved. Its colour in the maſs affords no criterion of its purity or goodneſs.

Scammony has a ſlight unpleaſant ſmell, and a weak bitteriſh ſubacrid taſte. It conſiſts of about equal parts of reſinous and gummy matter, and hence diſſolves almoſt totally in a mixture of equal parts of rectified ſpirit and water, that is, in proof ſpirit. Rectified ſpirit takes up the reſin, with ſome part of the gum: if the tincture be inſpiſſated a little, and then mixed with water, the gum continues diſſolved, and the pure reſin precipitates. By trituration with water, or by bare maceration, the ſcammony is reſolved into a milky liquor verging to greeniſh; which on ſtanding depoſites ſome portion of the reſin, but retains its milkineſs.

This gummy-reſin is one of the ſtrong ſtimulating cathartics; more kindly in operation, and hence in more general uſe, than moſt of the other ſubſtances of that claſs: the doſe is from two or three grains to twelve. Sundry ill qualities have been aſcribed to it, which it is not found to poſſeſs: and ſundry correctors have been deviſed, which it does not appear to want. In cold indolent ſerous habits, ſcammony itſelf procures generally a plentiful evacuation with great eaſe and ſafety: in inflammatory caſes, and the more irritable diſpoſitions, it is indeed dangerous; but no otherwiſe ſo than the reſt of the ſtrong purgatives; and no otherwiſe than by virtue of that power on which its efficacy in the oppoſite circumſtances depends.

By the ſmallneſs of the doſe of this medicine, its eaſy ſolubility, and its having little taſte, it is fitted for being commodiouſly taken in almoſt any form. It is made in the ſhops into a powder, with the addition of three fourths its weight of calcined hartſhorn to divide and diſunite it†; or with equal its weight of cryſtals of tartar‡. A ſcammoniate electuary is compoſed of one ounce of ſcammony and four of honey, aromatiſed with half an ounce of cloves, half an ounce of ginger, and a ſcruple of the eſſential oil of caraway-ſeeds; of which compoſition, one dram and a half contain fifteen grains of the ſcammony†. Agreeable purging troches, for thoſe who are not eaſily prevailed upon to take medicines of this kind in other forms, are prepared, by grinding together three drams of ſcammony, four drams of cryſtals of tartar, four drops of oil of cinnamon, and eight ounces of fine ſugar, and moiſtening the mixture with ſo much roſe-water as will render it of a due conſiſtence for being formed: each tablet is made to weigh about a dram‡, and conſequently contains two grains and a half of ſcammony. One of the moſt elegant liquid preparations is a ſolution of the ſcammony in a ſtrong infuſion or decoction of liquorice, poured off from the feces, and aromatiſed with ſome grateful diſtilled water or aromatic tincture; as thoſe of cardamom-ſeeds.

Pulvis e ſcammonio comp. †*Ph. Lond.* ‡*Ph. Edinb.*

† Electar. e ſcammonio *Pharm. Lond.*

‡ Morſuli purgantes *Ph. Brandenburg.*

The dried root of the plant, as well as its juice, may perhaps deſerve ſome notice. Dr. Ruſſel, to whom the public is obliged for an accurate hiſtory of this drug, relates that a decoction of half an ounce of the root procured five ſtools, without gripes, ſickneſs, or any manner of uneaſineſs, and, on repeating the trial ſeveral times, had the ſame effect: and that the decoctions are entirely without ſmell, and in taſte rather ſweetiſh than diſagreeable. Neither the ſtalks, leaves, flowers, or ſeeds, ſeemed to have any purgative virtue (a).

SCILLA.

SCILLA Pharm. Lond. & Edinb. Scilla radice alba, & ſcilla vulgaris radice rubra C. B. Ornithogalum maritimum Tourn. Scilla maritima Linn. SQUILL or SEA-ONION: a plant with a large bulbous onion-like root; from which riſe, firſt a naked ſtalk bearing ſeveral hexapetalous white flowers, and afterwards large green lily-like leaves with a remarkable rib in the middle of each. It grows ſpontaneouſly on ſandy ſhores in Spain and in the Levant, from whence we are annually ſupplied with the roots. They ſhould be choſen large, plump, freſh, and full of a clammy juice: ſome are of a reddiſh colour, and others white, but no difference is obſerved in the qualities of the two ſorts, and hence the college allows both to be taken promiſcuouſly.

(a) *Medical obſervations and inquiries, by a ſociety of phyſicians in London.*

THIS root is to the taſte very nauſeous, intenſely bitter, and acrimonious: much handled, it exulcerates the ſkin. Taken internally, it acts as a powerful attenuant and aperient: in doſes of a few grains it promotes expectoration and urine: in ſomewhat larger ones, it proves emetic and ſometimes purgative. It is one of the moſt certain diuretics in hydropic caſes, and expectorants in aſthmatic ones, where the lungs or ſtomach are oppreſſed by tenacious phlegm, or injured by the imprudent uſe of opiates.

This medicine, on account of its ungrateful taſte, is moſt commodiouſly taken in the form of pills; into which the dried root may be reduced, by beating it with thrice its weight each of ammoniacum and leſſer cardamom-ſeeds in powder, and extract of liquorice, and a ſufficient quantity of ſimple ſyrup. In whatever form ſquills are given, unleſs when deſigned to act as an emetic, the addition of ſome grateful aromatic material is of uſe, to prevent the nauſea which of themſelves they are very apt, even in ſmall doſes, to occaſion.

Pil. ſcilliticæ *Phar. Edinb.*

The freſh root loſes in drying about four fifths of its weight, without any conſiderable loſs of its taſte or virtue; the vapour which exhales appearing to be little other than merely aqueous. Hence four grains, which are the mean doſe of the dry root in powder, are equivalent to near a ſcruple of the freſh ſquill. The moſt convenient way of drying it is, after peeling off the outer ſkin, to cut the roots tranſverſely into thin ſlices (not to ſeparate the coats, as has been uſually directed) and expoſe them to a gentle warmth.

Scilla exſiccata *Pharm. Lond. & Ed.*

The ancients, in order to abate the acrimony of the ſquill for certain purpoſes, incloſed it (after ſeparating the ſkin, and the fibres at the bottom with the hard part from which they iſſue) in a paſte made of flour and water, and then baked it in an oven, till the paſte became dry, and the ſquill ſoft and tender throughout. The ſquill, ſo prepared, was beaten

Scilla cocta *Pharm. Lond.*

Troch. e ſcilla *Ph. Lond.*

beaten with two thirds its weight of flour, the mixture formed into troches, and dried with a gentle heat. Theſe troches were ſuppoſed to be alexipharmac, and in this light were made an ingredient in theriaca, for which purpoſe they are ſtill retained.

Water, wine, proof ſpirit, and rectified ſpirit, extract the virtues both of the freſh and the dry root. Nothing riſes in diſtillation with any of theſe menſtrua, the entire bitterneſs and pungency of the ſquill remaining concentrated in the inſpiſſated extracts: the ſpirituous extract is in ſmaller quantity than the watery, and of a proportionably ſtronger almoſt fiery taſte.

Alkalies conſiderably abate both the bitterneſs and acrimony of the ſquill: vegetable acids make little alteration in either, though the admixture of the acid taſte renders that of the ſquill more ſupportable. Theſe acids extract its virtue equally with watery or ſpirituous menſtrua; and, as an expectorant in diſorders of the breaſt, excellently coincide with it. The college of London directs an acetous tincture to be prepared, by macerating a pound of the dry roots in ſix pints of vinegar, with a gentle heat: to the liquor preſſed out, and after ſettling poured off from the feces, one twelfth its quantity of proof ſpirit is added, to prevent its growing ſoon foul. The college of Edinburgh for the ſame preparation directs the proportions of two ounces of dried ſquills, two pounds and a half of diſtilled vinegar, and three ounces of rectified ſpirit. A ſcillitic oxymel is obtained by boiling a quart of the acetous tincture with three pounds of clarified honey, till the mixture acquires the conſiſtence of a ſyrup: and a ſyrup of ſquills, by diſſolving three pounds and a half of fine ſugar in two pounds of the vinegar. Theſe preparations are uſed, as expectorants, in doſes of one, two, or three drams, along with cinnamon or ſome other grateful water: where the firſt paſſages are overloaded with viſcid phlegm, an ounce or more is given at once, to procure a more ſpeedy and effectual evacuation by vomit.

Acetum ſcilliticum *Ph. Lond. & Ed.*

Oxym. ſcillit. *Ph. Lon.*

Syr. ſcillit. *Phar. Edin.*

SCINCUS.

SCINCUS Pharm. Lond. Scincus ſeu crocodilus terreſtris Raii. The Skink: a ſmall amphibious animal, of the lizard kind, clothed with greyiſh ſcales, caught about the Nile, *&c.* and thence brought, dried, to us, remarkably ſmooth and gloſſy as if varniſhed. The fleſh of this animal, particularly of the belly, has been ſaid to be diuretic, alexipharmac, aphrodiſiac, and uſeful in leprous diſorders. Whatever virtues it may have when uſed freſh, as food, it is not expected to be of any importance as it comes to us, and ſerves only to increaſe the number of the articles of which mithridate is compoſed.

SCORDIUM.

SCORDIUM Pharm. Lond. & Edinb. C. B. Chamædrys paluſtris & triſſago paluſtris quibuſdam Teucrium Scordium Linn. WATER-GERMANDER: a trailing plant, with oblong, oval, indented, ſoft, hoary leaves, ſet in pairs, without pedicles: in their boſoms iſſue purpliſh monopetalous flowers, not above four or five together, each cut into five ſegments and followed by four ſmall ſeeds lodged in the cup. It is ſometimes found wild in watery places, but the ſhops are ſupplied chiefly from gardens: it is perennial, and flowers in June.

THE leaves of ſcordium, rubbed betwixt the fingers, yield a moderately ſtrong ſmell, ſomewhat of the garlick kind: to the taſte they diſcover a conſiderable bitterneſs and ſome pungency; but the aſtringent power, which ſome aſcribe to them, could not be diſtinguiſhed, either by the taſte, or by ſolution of chalybeate vitriol. They are recommended as alexipharmacs and corroborants, in malignant and putrid diſorders, and in laxities of the inteſtines: they enter ſeveral officinal compoſitions in thoſe intentions, and are ſometimes employed externally in antiſeptic cataplaſms and fomentations.

On keeping the dry herb for ſome months, its ſmell is diſſipated; and the bitterneſs, thus diveſted of the flavouring matter, proves conſiderably leſs ungrateful than at firſt. The leaves, moderately and newly dried, give out their ſmell and taſte both to water and to rectified ſpirit; and tinge the former of a browniſh, the latter of a deep green colour. In diſtillation, their peculiar flavour ariſes with water; but the impregnation of the diſtilled fluid is not ſtrong, nor could any eſſential oil be obtained on ſubmitting to the operation ſeveral pounds of the herb: the remaining decoction, inſpiſſated, leaves a very bitter mucilaginous extract. Rectified ſpirit brings over little or nothing: the inſpiſſated extract partakes in a conſiderable degree of the flavour of the ſcordium, and proves in bitterneſs alſo far ſtronger than the watery.

SCORZONERA.

SCORZONERA Pharm. Edinb. (a) *Scorzonera latifolia ſinuata C. B. Viperaria & ſerpentaria hiſpanica quibuſdam. Scorzonera hiſpanica Linn.* VIPERS-GRASS: a plant with large ſharp-pointed leaves, ſlightly ſinuated about the edges, having a large prominent rib in the middle, joined to the ſtalks without pedicles: on the tops of the branches grow yellow floſculous flowers, ſet in ſcaly cups, followed by oblong roundiſh ſtriated ſeeds winged with down: the root is long, ſingle, from the ſize of a gooſe-quill to that of the little finger, of a dark colour on the outſide and white within. It is perennial, a native of Spain, and common in our culinary gardens.

THE roots of ſcorzonera have been employed medicinally as alexipharmacs, and in hypochondriacal diſorders and obſtructions of the viſcera; but at preſent are more properly looked upon as alimentary articles, in general ſalubrious, and moderately nutritious. They abound with a milky juice, of a ſoft ſweetiſh taſte, but which in drying contracts a ſlight bitterneſs. Extracts made from them by water are conſiderably ſweet and mucilaginous: extracts made by rectified ſpirit have a leſs degree of ſweetiſhneſs, accompanied with a ſlight grateful warmth. In Cartheuſer's experiments, the ſpirituous extract amounted to one third the weight of the root, and the watery to above one half: as his watery extract, though in larger quantity than the ſpirituous, was nevertheleſs, like mine, ſweeter, it ſhould ſeem that the ſweet matter of ſcorzonera is ſomewhat different, in regard to its ſolubility, from that of moſt of the other vegetable ſweets that have been examined, the ſpirituous extracts having generally much the greateſt ſweetneſs.

SCROPHULARIA.

FIGWORT: a plant with ſquare ſtalks; the leaves ſet in pairs, at diſtances, in oppoſite directions; the branches terminated by looſe ſpikes of irregular, purple, helmet-ſhaped flowers; each of which is followed by a roundiſh pointed capſule, containing numerous ſmall ſeeds in two cells. It is perennial.

(a) Expunged.

1. Scrophularia vulgaris *Pharm. Edinb.(a) Scrophularia nodoſa fœtida C. B. Millemorbia quibuſdam. Scrophularia nodoſa Linn.* Common figwort or kernelwort: with the leaves ſomewhat heart-ſhaped and ſerrated about the edges; the roots long, thick, and full of knots and tubercles. It grows wild in woods and hedges, and flowers in July.

The roots and leaves of this plant have been celebrated both internally and externally, againſt inflammations, the piles, ſcrophulous tumours, and old ulcers. Their ſenſible qualities are, a rank ſmell ſomewhat like that of elder leaves but ſtronger, and a diſagreeable bitteriſh taſte. The anodyne and anti-inflammatory virtues, which they are reckoned to exert in external applications, are attributed in great part to the odorous matter, which is ſuppoſed to be ſomewhat of the narcotic kind: the root, which has leſs of this ſmell than the leaves, has been generally preferred for internal uſe. At preſent, they are both among us diſregarded.

2. Scrophularia aquatica major *ſeu Betonica aquatica Pharm. Edinb. (a) Scrophularia aquatica major C. B. Scrophularia aquatica Linn.* Greater water figwort, water betony: with the leaves oblong, nearly oval, crenated about the edges; the ſtalks winged at the angles; the root compoſed of numerous white ſtrings iſſuing from one head. It grows in watery places, and flowers in July.

The leaves of this ſpecies are recommended for the ſame purpoſes as thoſe of the preceding, to which they have by ſome been preferred: in taſte and ſmell, they are ſimilar, but weaker. Mr. Marchant reports, in the memoires of the French academy, that this plant is the ſame with the *iquetaia* of the Brazilians, celebrated as a ſpecific corrector of the ill flavour of ſena: on his authority, the Edinburgh college, in their common infuſion of that drug, directed two thirds its weight of the water figwort leaves to be joined; but as they have now diſcarded this ingredient, we may preſume that it was not found to be of much uſe.

(a) Expunged.

SEDUM.

SEDUM MAJUS ſeu Sempervivum majus Pharm. Edinb.(a) *Sedum majus vulgare C. B. Aizoon & barba jovis quibuſdam. Sempervivum tectorum Linn.* HOUSELEEK or SENGREEN: a plant with numerous, thick, ſtiff, fleſhy, pointed leaves, lying over one another in form of a roundiſh cluſter; in the middle of which riſes a ſtiff ſtalk, covered with ſmaller leaves, divided at the top into ſeveral branches, bearing purpliſh flowers with twelve petala, which are followed by the ſame number of capſules full of ſmall ſeeds. It is perennial and evergreen, grows on old walls and the tops of houſes, and flowers in June.

THE leaves of houſeleek, of no remarkable ſmell, diſcover to the taſte a mild ſubacid auſterity: their expreſſed juice, of a pale yellowiſh hue when filtered, yields on inſpiſſation a deep yellow, tenacious, mucilaginous maſs, conſiderably acidulous and acerb: from whence it may be preſumed, that this herb has ſome claim to the refrigerant and reſtringent virtues that have been aſcribed to it. It is obſervable that the filtered juice, on the addition of an equal quantity of rectified ſpirit of wine, forms a light white coagulum, like creme or fine pomatum, of a weak but penetrating taſte: this, freed from the fluid part, and expoſed to the air, almoſt totally exhales. From this experiment it is concluded by ſome that houſeleek contains a volatile alkaline ſalt (b): but the juice coagulates in the ſame manner with volatile alkalies themſelves, as alſo with fixt alkalies: acids produce no coagulation.

SELENITES.

SELENITES: an earthy or ſtony concrete; not diſſoluble in acids; calcining in a gentle heat into a ſoft powder †, which forms a tenacious paſte with water: compoſed of calcareous earth and vitriolic acid.

† Plaſter of Paris.

THE vitriolic acid, poured on crude calcareous earths, as chalk, limeſtone, marble, does not diſſolve or unite with them, at leaſt in any

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(a) Expunged.

(b) Burghart, *Medicorum Sileſiacorum ſatyræ, ſpecim.* IV. *obſ.* ii. *p.* 11.

conſiderable degree: but if the earth be previouſly diſſolved in any other acid, the vitriolic acid, ſuperadded to this ſolution, abſorbs the diſſolved earth, and forms with it a concrete no longer ſoluble, which of courſe renders the liquor milky, and on ſtanding ſettles to the bottom, either in a powdery or cryſtalline form, according as the liquor was leſs or more diluted with water. Native mineral concretes of this kind, when pellucid and cryſtalline, are called *ſelenites*; when compoſed of a number of thin tranſparent coats or leaves, *lapis ſpecularis*, *Muſcovy glaſs*, or *iſinglaſs*; when in large ſtony maſſes, of a granulated texture, *gypſum*; and when the maſſes are of a fibrous texture, *ſtriated gypſum* or *Engliſh talc*. All theſe ſubſtances are made to diſcover their compoſition, by ſtrongly calcining them in contact with the burning fuel: the inflammable principle of the coals abſorbs their vitriolic acid, from which combination is produced common ſulphur, greateſt part of which exhales; and the remaining calcined earth, thus deprived of the acid, is found to be a perfect quicklime.

This concrete, in its different forms, has been recommended as an aſtringent in fluxes and hemorrhagies; a virtue which agrees but ill with its indiſſolubility and want of taſte. It is often met with in the reſidua of waters, both of the common and medicinal ſprings.

SENA.

SENA Ph. Lond. *Senna Ph. Edinb.* *Folium orientale.* SENA: the leaf of an annual, woody, pod-bearing plant *(ſenna alexandrina ſive foliis acutis C. B.* *Caſſia (ſenna) foliolis trijugatis quadrijugatiſque Linn.)* brought dry from Alexandria in Egypt. It is of a lively yellowiſh green colour, an oblong ſomewhat oval figure, ſharp-pointed at the ends, about a quarter of an inch broad, and not a full inch in length. Some inferiour ſorts are brought from Tripoli and other places: theſe may be diſtinguiſhed, by their being either narrower, longer, and ſharper pointed; or larger, broader, and round pointed, with ſmall prominent veins; or large, obtuſe, and of a freſh green colour without any yellow caſt.

SENA is a moderately ſtrong, and in general a ſafe cathartic: Geoffroy ſpecifies hemorrhagies, inflammations of all kinds, and diſorders of the breaſt, as being almoſt the only exceptions to its uſe. The doſe in ſubſtance is from a ſcruple to a dram; in infuſion, from one dram to three or four. It gives out its virtue both to watery and ſpirituous menſtrua: to water and proof ſpirit it communicates a browniſh colour, more or leſs deep according to the proportions; to rectified ſpirit, a fine green. There are two inconveniences often complained of in this medicine, its being liable, in moſt conſtitutions, to occaſion gripes; and its being accompanied with an ill flavour, which is apt to nauſeate both the ſtomach and the palate. The firſt may be greatly obviated by dilution, the latter by aromatic and other additions; ſeveral compoſitions of this kind are prepared in the ſhops, both ſufficiently palatable, and which operate for the moſt part with eaſe and mildneſs.

Infuſum tamarindorum cum ſenna *Phar. Edinb.*

Infuſ. ſenæ commune *Pharm. Lond.*

Infuſ. ſenæ limoniatum *Pharm. Lond.*

Six drams of tamarinds, one of cryſtals of tartar, half a dram of coriander ſeeds, half an ounce of brown ſugar, and one, two or three drams of ſena are infuſed in eight ounces of boiling water, in an unglazed earthen veſſel, for four hours, and then ſtrained. Or three drams of ſena are infuſed in a quarter of a pint of boiling water, till the liquor has grown cold, with half a dram of leſſer cardamom ſeeds huſked, and three fourths of a dram of cryſtals of tartar, which laſt are previouſly boiled in the water till diſſolved; or with two drams of freſh lemon peel, and two drams by meaſure of lemon juice. The committee of the London college obſerve, that this laſt is the moſt agreeable form, they have been able to contrive, for the exhibition of ſena to thoſe who are more than ordinarily offended with its flavour; and that though acids are generally ſuppoſed to impede the action of water on vegetables, yet the infuſions of ſena made with acids are found, from experience, not to fail in their intention. Indeed if the acids really weaken the diſſolving power of the water, which it is probable they do in ſome degree, it ſhould ſeem to be, on this account, rather of advantage than otherwiſe; for, as the committee further obſerve, in a medicine very nauſeous to many, it is of primary conſequence that only the lighter and leaſt diſguſtful parts be extracted. On this principle, ſome macerate the ſena for a night in cold water, which becomes ſufficiently impregnated with its purgative virtue, without extracting ſo much, as boiling water does, of the nauſeous matter: if the liquor, poured off from the ſena, be boiled a little by itſelf, great part of its ill flavour will be diſſipated; and the remains of its offenſiveneſs may be covered by infuſing in it ſome bohea tea. If the coction is continued for any conſiderable time, the purgative virtue of the ſena will be diminiſhed; for the inſpiſſated watery extracts are ſcarcely found to purge ſo much, as one fourth of the infuſion or decoction they were made from, or ſo much as an equal weight of the leaves in ſubſtance.

The officinal ſpirituous tinctures of ſena are prepared by digeſtion for ſome days, with† or without‡ heat, in proof ſpirit. The proportions, in the London pharmacopœia, are three ounces of ſena to a quart of the ſpirit, to which are added four ounces of ſtoned raiſins, three drams of caraway ſeeds, and one dram of leſſer cardamom ſeeds huſked: in the Edinburgh, two ounces of ſena to three pounds and a half of the ſpirit, with the addition of one ounce of jalap, half an ounce of coriander ſeeds, and four ounces of white ſugar-candy in powder, which laſt is directed to be diſſolved in the tincture after ſtraining it from the other ingredients. Both theſe tinctures are agreeable and uſeful carminative purgatives, eſpecially to thoſe who have accuſtomed themſelves to ſpirituous liquors: the ill flavour of the ſena is in great meaſure covered, and its offending the ſtomach or producing gripes prevented, by the warm ſeeds and the ſweets. Several compoſitions of this kind have been offered to the public, under different names: the two above are inferiour to none; and ſuperiour to moſt of them.

† Tinctura ſenæ *Ph. Lon.*
‡ Tinct. ſennæ comp. vulgo elixir ſalutis *Ph. E.*

SERPENTARIA.

SERPENTARIA VIRGINIANA Pharm. Lond. & Edinb. Serpentaria virginiana & Viperina & Colubrina virginiana Pharm. Pariſ. VIRGINIAN SNAKEROOT: the root of a ſpecies of ariſtolochia growing in Virginia and Carolina, *ariſtolochia (ſerpentaria) foliis cordatis oblongis planis, caulibus infirmis flexuoſis teretibus, floribus ſolitariis Linn.* The root is ſmall, light, buſhy, compoſed of a number of ſtrings or fibres iſſuing from one head and matted together, of a browniſh colour on the outſide, and paler or yellowiſh within.

SNAKEROOT has an aromatic ſmell, approaching to that of valerian, but more agreeable, and a warm bitteriſh pungent taſte, which is not eaſily concealed or overpowered by a large admixture of other materials. It gives out its active matter both to water and rectified ſpirit, and tinges the former of a deep brown, the latter of an orange colour. Greateſt part of its ſmell and flavour is carried off in evaporation or diſtillation by both menſtrua: along with water there ariſes, if the quantity of the root ſubmitted to the operation be large, a ſmall portion of a pale-coloured eſſential oil, of a conſiderable ſmell, but no very ſtrong taſte, greateſt part of the camphorated pungency, as well as bitteriſhneſs of the root, remaining in the inſpiſſated extract. The ſpirituous extract is ſtronger than the watery; not ſo much from its having loſt leſs in the evaporation, as from its containing the active parts of the root concentrated into a ſmaller volume; its quantity amounting only to about one half of that of the other.

This root is a warm diaphoretic and diuretic. It is reckoned one of the principal medicines of the alexipharmac kind; and as ſuch is in general uſe, in low malignant fevers and epidemic diſeaſes, for raiſing the pulſe, promoting a diaphoreſis, and correcting a putrid diſpoſition of the humours. It is given, in ſubſtance, from a few grains to a ſcruple or half a dram; in decoction or infuſion, to a dram and upwards. Tinctures of it are prepared in the ſhops, by macerating three ounces of the root in a quart of proof ſpirit[†], or two ounces, with one dram of cochineal, in two pounds and a half of the ſame ſpirit[‡].

Tinctura ſerpentariæ
[†] *Ph. Lond.*
[‡] *Ph. Edinb.*

S E S E L I.

SESELI Pharm. Lond. Liguſticum quod ſeſeli officinarum C. B. Laſerpitium Siler Linn. HARTWORT or SERMOUNTAIN: a tall umbelliferous plant, with large leaves, compoſed of oblong pointed ſections ſet in pairs or three together: the entire umbel, and its ſubdiviſions, have a circle of little leaves at their origin: the ſeeds are large, of a pale brown colour, oblong, flat on one ſide, convex and ſtriated on the other, and edged with a leafy margin: the root is large, thick, and branched. It is perennial, grows wild in ſome of the ſouthern parts of Europe, is raiſed with us in gardens, and flowers in June.

BOTH the ſeeds of this plant, which are the part directed in our pharmacopœias, and the roots, appear to be uſeful aromatics, though not regarded in practice, of an agreeable ſmell, and a warm glowing ſweetiſh taſte. The roots have the greateſt warmth and pungency: the ſeeds, the greateſt ſweetneſs and the moſt pleaſant flavour. A ſpirituous extract of the ſeeds is a very elegant aromatic ſweet.

SESELI MASSILIENSE.

SESELI MASSILIENSE Pharm. Edinb.(a) *Seſeli maſſilienſe fœniculi folio C. B. Fœniculum tortuoſum J. B. Seſeli tortuoſum Linn.* HARTWORT OF MARSEILLES: a large ſpreading branched umbelliferous plant; with the ſtalk and branches firm, woody, knotty, and variouſly bent; the leaves finely divided, like thoſe of fennel, but ſomewhat thicker, ſhorter, ſtiffer, and more diſtant from one another; the ſeeds alſo in ſhape like thoſe of fennel, and of a pale grey colour. It is perennial, and a native of the ſouthern parts of Europe, from whence the ſeeds are ſometimes brought to us.

THE ſeeds of this plant have an agreeable aromatic ſmell, and a very warm biting taſte: they are more pungent than thoſe of the foregoing ſeſeli, but want their ſweetneſs.

SIGILLUM SALOMONIS.

CONVALLARIA ſeu Sigillum Salomonis Pharm. Edinb.(b) *Polygonatum latifolium vulgare C. B. Convallaria multiflora Linn.* SOLOMONS-SEAL: a plant with unbranched ſtalks, bearing oval narrow leaves ribbed like thoſe of plantane, generally all on one ſide: on the other ſide hang oblong monopetalous white flowers, two or more together, on long pedicles, followed each by a black berry: the root is white, thick, fleſhy, with ſeveral joints, and ſome flat circular depreſſions ſuppoſed to reſemble the ſtamp of a ſeal. It is perennial, grows wild in woods, and flowers in May.

THE roots of Solomons-ſeal are recommended externally as reſtringents; and internally as incraſſants and mild corroborants. They have little or no ſmell; to the taſte they diſcover a conſiderable ſweetneſs and viſcidity, followed by a very ſlight impreſſion of bitteriſhneſs and acrimony,

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(a) Expunged.

*(b) The Edinburgh college give the *Convallaria Polygonatum* of Linnæus as their ſpecies.

mony, which is diſſipated by boiling. It is ſaid that they have been uſed with ſucceſs in the hæmorrhoids *(a)*. The flowers, berries, and leaves, are acrid and poiſonous *(b)*.

SIMAROUBA.

SIMAROUBA Pharm. Edinb. the bark of the *Quaſſia Simarouba, Linn. ſuppl. Quaſſia dioica, Pharm. Suec. Evonymus fructu nigro tetragono Barrer. Æquin.* It is brought from Guiana, in long pieces, of a yellowiſh white colour, light, tough, and of a fibrous texture.

Mr. de Juſſieu reports, that this bark is of common uſe in Guiana, againſt dyſenteric fluxes, and was brought from thence into Europe in the year 1713: that the fluxes which, in France, ſucceeded the exceſſively hot ſummer of 1718, and which not only reſiſted, but were aggravated by, purgatives, aſtringents, and ipecacoanha, happily yielded to ſimaruba: that decoctions of an ounce or half an ounce in a ſmall quantity of water, the doſe uſed by the natives of Guiana, occaſioned often vomiting, almoſt always uneaſy ſweats, and ſometimes an increaſe of the bloody and ſerous diſcharges by ſtool; but that a decoction of two drams in a quart of water, boiled to the conſumption of one third, divided into four doſes, and taken warm at intervals of three hours, abated the pain in one day, and when continued for a ſhort time completed the cure, without producing any nauſea or diſturbance: that it is not accompanied with the ill effects of aſtringents: that it abates ſpaſmodic and hyſteric ſymptoms: that it anſwers beſt in fluxes of the ſeroſo-bilious, bloody and mucous kind, ſupported by a convulſive motion of the inteſtines, where there is no fever, where the functions of the ſtomach are unhurt, and in teneſmi *(c)*. Dr. Degner likewiſe made uſe of this bark in the above form, with good ſucceſs, after proper evacuations, in an epidemic putrid dyſentery, which raged at Nimeguen during the ſummer and autumn of 1736: he ſays it acted mildly and almoſt inſenſibly, and that its effects were ſpeedier in bloody than in bilious diſcharges: he takes notice alſo that the barks procured under the name of ſimaruba, in different parts of Holland, from Leipſick, and from Paris, differed

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(a) Cullen, *Mat. Med.* *(b)* Id.

(c) Mem. de l'acad. des ſcienc. de Paris, 1729. Geoffroy, *mat. med.* ii. 211.

greatly in quality from one another; but does not mention what the differences were, nor the qualities of the genuine or beſt ſort *(a)*.

The ſimaruba, which I have met with in our ſhops, has a moderately ſtrong, durable, not very ungrateful bitter taſte, without ſmell, and without any manifeſt aſtringency. Macerated in water, or in rectified ſpirit, it quickly impregnates both menſtrua with its bitterneſs, and with a yellow tincture. It ſeems to give out its virtue more perfectly to cold than to boiling water; the cold infuſion being rather ſtronger in taſte than the decoction; which laſt, of a tranſparent yellow colour whilſt hot, grows turbid and reddiſh brown as it cools. The milky appearance, which Juſſieu ſays it communicates to boiling water, I have not obſerved in the decoction of any of the ſpecimens I examined.

SINAPI.

SINAPI Pharm. Lond. Sinapi album Pharm. Edinb. Sinapi rapi folio C. B. Sinapis nigra Linn. *(b) MUSTARD: an annual plant; with long rough leaves divided to the rib into irregular ſegments, of which the extreme one is largeſt; producing, at the tops of the branches, tetrapetalous yellow flowers, followed, each, by a ſhort, ſmooth, quadrangular pod, divided longitudinally by a membrane which projects at the ends, containing ſmall, roundiſh, reddiſh-brown or dark-coloured ſeeds. It is a native of England, but commonly cultivated for medicinal and dietetic uſe.

MUSTARD ſeed is one of the ſtrongeſt of the pungent, ſtimulating, diuretic medicines that operate without exciting much heat. It is ſometimes taken, unbruiſed, to the quantity of a ſpoonful at a time; in paralytic, cachectic, and ſerous diſorders. In this manner of exhibition it generally opens the body; whereas the powder is apt to occaſion vomiting, in which intention it is ſometimes given diffuſed in warm water, of which repeated draughts muſt be drunk, to continue the effect. It is applied alſo, as an external ſtimulant, to benumbed or paralytic limbs;

(a) *Hiſt. dyſenteriæ bilioſo-contagioſæ, in Append. ad act. nat. curioſ. vol.* v.

*(b) The *Sinapis alba Linn.* is the Edinburgh ſpecies, which differs little from the black, or common, except in being leſs pungent and bitter. It ſhould ſeem therefore to be leſs proper for external uſe, at leaſt.

to parts affected with fixt rheumatic pains; and to the ſoles of the feet, in the low ſtage of acute diſeaſes, for raiſing the pulſe: in this intention, a mixture of equal parts of the powdered ſeeds and crumb of bread, with the addition, ſometimes, of a little bruiſed garlick, are made into a cataplaſm with a ſufficient quantity of vinegar.

Ol. ſemin. ſinapis *Ph. Lond.*

Muſtard ſeed yields upon expreſſion a conſiderable quantity of oil, which is by ſome recommended externally againſt rheumatiſms and palſies, though it has nothing of that quality by which the ſeeds themſelves prove uſeful in thoſe diſorders; the oil being mild and inſipid as that of olives, and the pungency of the ſeed remaining entire in the cake left after the expreſſion. Nor is any conſiderable part of the pungent matter extracted by rectified ſpirit; the tincture, which is of a pale amber colour, having very little taſte; and the extract, obtained by inſpiſſating it, being only bitteriſh and oily: the quantity of extract is about one ſixteenth the weight of the ſeeds. The bruiſed ſeeds give out readily to water nearly the whole of their active matter: added to boiling milk, they curdle it, and communicate their pungency to the whey. Diſtilled with water, they yield a limpid eſſential oil, extremely pungent and penetrating both in ſmell and taſte, and ſo ponderous as to ſink in the aqueous fluid: the remaining decoction, thus diveſted of the principle in which alone the acrimony of the muſtard reſides, leaves on being inſpiſſated a ſweetiſh mucilaginous extract.

SOLANUM.

NIGHTSHADE: a plant with a monopetalous flower, divided into five ſegments, having its cup divided in the ſame manner, with the ſame number of ſtamina in the middle, and followed by a juicy berry.

1. BELLADONA *Pharm. Edinb. & Pariſ. Solanum melanoceraſos C. B. Solanum lethale. Atropa Belladonna Linn.* Deadly nightſhade or dwale: with the leaves oval, pointed, ſomewhat hairy; the flowers ſolitary in the boſoms of the leaves, of a dull purpliſh colour, tubulous, ſlightly cut, with the ſtamina ſeparate from one another; the berries of a gloſſy black. It is perennial, grows wild in ſome ſhady waſte grounds, and flowers in July.

2. SOLANUM *Pharm. Pariſ.* *Solanum officinarum C. B.* *Solanum nigrum Linn.* Garden nightſhade: with the leaves oval, pointed, having generally ſome irregular indentations; the flowers in cluſters, white, not tubulous, deeply cut, the ſegments ſpread out, and the tips of the ſtamina united into one button; the berries black. It is annual, grows ſpontaneouſly in cultivated grounds, and flowers in Auguſt.

The leaves of theſe plants have a faint ſmell, ſomewhat of the narcotic kind, which in drying is diſſipated: on the organs of taſte, whether freſh or dry, they make ſcarcely any impreſſion. Their effects are nevertheleſs very powerful: in external applications, they are ſaid to act as refrigerants, reſolvents, and diſcutients: taken internally, in the quantity of not many grains, they are highly deleterious, the firſt ſomewhat the moſt ſo. In very ſmall doſes, as an infuſion in boiling water of half a grain or a grain of the dried leaves, they occaſion a warmth over the whole body; which is often followed by a ſweat, or an increaſe of the urinary diſcharge, or ſome looſe ſtools, or a ſickneſs and vomiting; and often by a headach, giddineſs, dimneſs of the ſight, and other paralytic ſymptoms *(a)*. In ſome cancerous, ulcerous, and hydropic caſes, theſe infuſions have been repeated, at bed-time, every two or three nights or oftener, and the quantity of the leaves in each doſe increaſed gradually to five or ſix grains or more, with apparent benefit: but they are ſo variable and irregular in their operation, and ſo liable, not only to fail of giving relief, but to be productive of very alarming ſymptoms by ſtrongly affecting the nervous ſyſtem, that their uſe is deſervedly laid aſide. Their good effects, when they happen to prove medicinal, ſeem to depend, not on any alterative or peculiarly deobſtruent power, but merely on the evacuations they produce: where they do not act as evacuants, they generally aggravate the complaints *(b)*.

* In the *Med. Comment.* Vol. I. p. 419. is a remarkable caſe of the efficacy of an external application of belladonna in diſcuſſing a ſcirrhous

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(a) Mr. Ray gives an account, from his own knowledge, of a pretty remarkable effect of a ſmall piece *(particula)* of a freſh leaf of belladonna applied externally to a little ulcer, ſuppoſed cancerous, below the eye: the uvea became in one night ſo relaxed, that it loſt all power of contracting the pupil, which, though expoſed to the ſtrongeſt light, continued dilated to four times its natural ſize, till the leaf being removed the parts gradually recovered their tone. The application was repeated three ſeveral times, and produced always the ſame effect. *Hiſt. plant.* 680.

(b) See Mr. Gataker's *obſervations* (and *the ſupplement* thereto) *on the internal uſe of the nightſhade*, and Mr. Bromfeild's *account of the Engliſh nightſhades and their effects.*

tumour in the rectum, near the anus, which almoſt totally blocked up the paſſage. The mode of application was a poultice of the root boiled in milk. This was applied to the anus and perinæum, and renewed morning and evening. In the ſpace of a month it entirely diſſolved the tumour, without any ſuppuration, or diſcharge of matter. The writer ſays that he could add more inſtances of the good effects of this plant externally applied.

The roots and berries appear to partake of the deleterious qualities of the leaves, though probably in different degrees: the berries in particular ſeem to be of much leſs activity. It is ſaid that three or four of the berries of the deadly nightſhade, which are reckoned more virulent than thoſe of the other ſort, have been ſometimes eaten without injury: Geſner reports that their expreſſed juice, boiled with a little ſugar to the conſiſtence of a ſyrup, proves, in doſes of a tea-ſpoonful, an effectual and ſafe anodyne, but gives a particular caution not to exceed this doſe. The Edinburgh college has directed the inſpiſſated juice of theſe berries to be kept as an officinal.

Succus ſpiſſatus belladonnæ *P. E.*

3. DULCAMARA *Pharm. Edinb. Solanum ſcandens ſeu dulcamara C. B. Amaradulcis & glycypicros quibuſdam. Solanum Dulcamara Linn.* Woody nightſhade or Bitterſweet: with ſeveral of the leaves, particularly the upper ones, cut deeply into three ſections, or rather furniſhed with two ſmaller appendages at the bottom; the flowers in cluſters, of a blue colour, with the ſegments ſpread out and the ſtamina united as in the ſecond ſpecies; the berries red. It grows by the ſides of ditches and in moiſt hedges, climbing upon the buſhes, with winding, woody, but brittle ſtalks. It is perennial, and flowers in June and July.

The roots and ſtalks of this ſpecies impreſs, on firſt chewing them, a conſiderable bitterneſs, which is ſoon followed by an almoſt honey-like ſweetneſs. They have been commended in different diſorders, as high reſolvents and deobſtruents: their ſenſible operation is by ſweat, urine, and ſtool; the doſe from four to ſix ounces of a tincture made by digeſting four ounces of the twigs in a quart of white wine. Experience has ſhewn, that they are by no means equally deleterious with the two preceding nightſhades; that they act more regularly and uniformly; and that, without producing nervous complaints, they produce more conſiderable evacuations, eſpecially by ſtool; but their virtues in particular caſes have not yet been ſufficiently aſcertained.

* In a medical diſſertation on this plant, printed at Upſal, a light decoction and infuſion of the ſtalks is the preparation recommended, and is ſaid to have been frequently employed with ſucceſs in violent iſchiadic and rheumatic pains. The efficacy of the dulcamara in the jaundice, ſcurvy, ſuppreſſed menſes, and the lues venerea, is alſo mentioned from other authors.

SPERMA CETI.

SPERMA CETI Pharm. Lond. & Edinb. Spermaceti, improperly ſo called: a ſpecies of fat; found in certain whales, particularly in their heads; artificially purified, by boiling with alkaline lye, to a ſnowy whiteneſs; and afterwards broken into flakes. It differs from the other animal fats, in not being diſſoluble by alkalies or combinable with them into ſoap; and in riſing almoſt totally in diſtillation, not in form of a fluid oil, but in that of a butyraceous matter reſembling, both in conſiſtence and ſmell, the butter of wax. In long keeping, it is apt to turn yellow and rancid: the matter, very ſmall in quantity, which has ſuffered this change, and which taints the reſt, is found to have loſt the diſcriminating characters of the ſpermaceti; being diſſoluble both by alkaline lye and by vinous ſpirits, ſo as to leave the remainder white and ſweet as at firſt.

This concrete, of a ſoft butyraceous taſte and no remarkable ſmell, is given with advantage in tickling coughs, in dyſenteric pains and eroſions of the inteſtines, and in ſuch caſes in general as require the ſolids to be ſoftened and relaxed, or acrimonious humours to be obtunded. It readily diſſolves in oils, and unites by liquefaction with wax and reſins; and in theſe forms is applied externally. For internal uſe, it may be diſſolved in aqueous liquors into the form of an emulſion, by trituration with almonds, the yolk or white of an egg, and more elegantly by mucilages; or made into a lohoch with proper additions.

* *SPIGELIA.*

SPIGELIA Pharm. Edinb. Anthelmia D^{ris}*. Lining. Spigelia marilandica Linn. Periclymeni virginiani flore coccineo planta marilandica, ſpica erecta, foliis conjugatis Cateſby carol.* INDIAN PINK: this plant has a perennial fibrous root, whence riſe ſingle ſtems, beſet with oppoſite oval-lanceolate, entire leaves, and crowned with a ſpike of tubular monopetalous red flowers, with five ſtamina and one piſtil. Each flower is ſucceeded by two round united bivalvular capſules, containing ſeveral ſmall ſeeds. It grows ſpontaneouſly in South Carolina, and other ſouthern provinces of North America.

The uſe of the root of this plant as an anthelmintic was communicated from the native Indians to the coloniſts, and it has ſince been much employed in that country. The firſt account of its virtues is to be met with in a paper of Dr. Lining's, in Vol. I. of the *Eſſays Phyſical and Literary*; and Dr. Garden has confirmed it in Vol. III. of the ſame publication, and has given a figure and particular deſcription of the plant.

The root is given both in powder and infuſion; but the powder is eſteemed moſt efficacious. The doſe is not accurately aſcertained, but extends from twelve to ſixty or ſeventy grains of the powder. It is found to be moſt efficacious when it purges, which it does not always do without ſome additions. The exhibition of a vomit previous to the uſe of the Indian pink has proved very ſerviceable. It ſometimes produces diſagreeable effects on the nervous ſyſtem, ſuch as giddineſs, dimneſs of the ſight, and convulſive motions of the muſcles of the eye. Theſe, according to Dr. Garden, are more likely to happen from a ſmall doſe than a large one, the latter more certainly proving purgative or emetic. Dr. Lining, on the other hand, repreſents theſe effects as conſequent upon too large a doſe. It is ſaid to act powerfully as a ſedative in abating the exacerbations of low remittent worm-fevers.

SPINA CERVINA.

SPINA CERVINA Pharm. Lond. Rhamnus catharticus ſive Spina cervina Pharm. Edinb. Rhamnus catharticus C. B. & Linn. Spina infectoria et cerviſpina quibuſdam. BUCKTHORN: a prickly buſh, or

low tree, common in hedges: with oval pointed leaves; producing in June ſmall greeniſh flowers; and about the beginning of October ripening its black berries, which contain a dark green juice, with four ſeeds in each. The berries of the black alder and dogberry tree, which are frequently, in our markets, mixed with or ſubſtituted for thoſe of buckthorn, may be diſtinguiſhed, by their juice having no greenneſs, and by their containing only one or two ſeeds.

Buckthorn berries have a faint unpleaſant ſmell, and a bitteriſh, acrid, nauſeous taſte. They operate briſkly by ſtool; and occaſion, at the ſame time, a thirſt and dryneſs of the mouth and throat, and not unfrequently ſevere gripes, eſpecially if water-gruel or other ſoft diluents are not freely drank ſoon after taking them. The doſe is ſaid to be, about twenty of the freſh berries in ſubſtance; twice or thrice that number in decoction; a dram, or a dram and a half, of the dried berries; an ounce of the expreſſed juice; or half an ounce of the rob or extract obtained by inſpiſſating the juice. Among us they have been employed only in the form of a ſyrup, in which they ſeem to operate leſs unkindly than in any other, and which is given by itſelf in doſes of three or four ſpoonfuls, or mixed in ſmaller quantities with other cathartics. The college of Edinburgh directs the ſyrup to be prepared by boiling the depurated juice with ſugar to a due conſiſtence: that of London adds a little cinnamon, ginger, and nutmegs, with a view to cover in ſome degree the ill flavour of the buckthorn: but notwithſtanding this improvement of the medicine, it is ſtill ſo unpleaſant and ſo churliſh, that it has now almoſt fallen into diſuſe.

Syrupus e ſpina cervina.

SPIRITUS VINOSUS.

VINOUS SPIRIT: an inflammable fluid, obtained by diſtillation from wines or other fermented liquors. As firſt diſtilled, it partakes both of the phlegm or watery part, and of the oil, of the fermented liquor; which oil, in the liquors commonly uſed for this purpoſe, is nauſeous and fetid.

1. Spiritus vinosus rectificatus *Pharm. Lond. & Edinb.* Rectified ſpirit of wine: a vinous ſpirit purified as much as poſſible both from its phlegm and ill ſmell.

Spirits drawn from wine, ſuch as French brandy, may be in great meaſure purified by ſimple diſtillation, in tall veſſels, with a gentle heat, the pure ſpirituous part riſing before the phlegm: if French brandy be thus diſtilled to one half, the diſtilled ſpirit proves tolerably pure. But wine or brandy being in this country too dear an article for diſtillation; and all vinous ſpirits, when perfectly purified, being one and the ſame thing; this purification is chiefly practiſed, among us, on the cheaper ſpirits of melaſſes and malt liquors. Theſe ſpirits, when freed by diſtillation from greateſt part of their phlegm, are ſtill found, particularly the latter, to abound with a very offenſive oil. To ſeparate this, they are mixed with equal their quantity of ſpring water, and the ſpirit gently drawn off again: a conſiderable portion of the oil is thus left behind in the water, which now proves turbid, and milky, and very nauſeous both in ſmell and taſte. By repeating this ablution with freſh quantities of water, the fouleſt and moſt offenſive ſpirits may be purified from all ill flavour.

Though ſpirits, by this treatment, may be diveſted of their oil, they cannot be freed wholly from phlegm; the gentleſt heat, in which they can be diſtilled, being ſufficient to raiſe a little watery vapour. To complete the purification, therefore, a little fixt alkaline ſalt, thoroughly dried and powdered, is added; which, imbibing the phlegm, is thereby diſſolved into a ponderous liquid, that does not mingle with the ſpirit, but ſettles at the bottom. If the ſpirit is very phlegmatic, four pints will require a pound of the alkali: if the diſtillation has been performed with due care, half this quantity, or leſs, will be ſufficient: in either caſe, if all the ſalt diſſolves, the ſpirit is to be digeſted with a little more, till at leaſt a part remains undiſſolved. The ſpirit, now poured off, is to be again diſtilled, in order to ſeparate from it a portion of the ſalt, which has united with it, and which, though extremely minute, is ſufficient to vary, in ſome reſpects, its qualities. As ſome particles of the alkali are apt to be carried up with it even in the diſtillation, ſo as to communicate an ill flavour, it is adviſeable to previouſly add a ſmall portion of calcined vitriol or burnt alum, which will completely abſorb the alkali, without giving any new impregnation to the ſpirit. In this manner was prepared the ſpirit uſed in the experiments of the preſent work under the name of rectified or pure ſpirit of wine.

Vinous ſpirits, thus rectified, have a very hot pungent taſte, without any particular flavour. They readily take fire, and burn totally away, without leaving any mark of an aqueous moiſture behind; though on catching the vapour that exhales from the flame, a conſiderable quantity of mere water is collected. On diſtilling them with the gentleſt heat, the laſt runnings prove as colourleſs, flavourleſs, and inflammable, as the firſt. They diſſolve diſtilled vegetable and animal oils, and all the pure reſins, into an uniform tranſparent fluid. They are the lighteſt of almoſt all known liquids: expreſſed oils, which ſwim on water, ſink freely in theſe to the bottom: a meaſure which holds ten ounces by weight of water, will contain little more than eight and a quarter of pure ſpirit.

2. Spiritus vinosus tenuior *Ph. Lond. & Edinb.* Proof ſpirit: the ſame ſpirit containing an admixture of an equal quantity [by meaſure] of water. "The beſt proof ſpirit is that diſtilled from French wine; "but for common uſes, may be employed the ſpirit drawn from the "ſyrupy matter which ſeparates in the purification of ſugar, commonly "called melaſſes †."—The ſpirits uſually met with, under the name of proof, are thoſe diſtilled from different fermented liquors, freed from their phlegm and their flavour only to a certain degree. Their purity, with regard to flavour, may be judged by the taſte, eſpecially if the ſpirit be firſt duly diluted: of their ſtrength, or the proportion of phlegm contained in them, the leaſt uncertain criterion ſeems to be their gravity, which is eſtimated moſt commodiouſly by the hydrometer. For the nicer purpoſes, a pure flavourleſs proof ſpirit may be obtained by mixing the foregoing rectified ſpirit with an equal meaſure of pure water.

† *Ph. Lond.*

Rectified ſpirit coagulates all the fluids of animal bodies, that have been tried, except bile and urine. It hardens the ſolid or conſiſtent parts, and preſerves them from corruption. Applied externally to living animals, it ſtrengthens the veſſels, contracts the extremities of the nerves, and deprives them of ſenſibility: hence its power of reſtraining hemorrhagies, abating ſuperficial pains, *&c.* Received into the ſtomach, undiluted, it produces the like effects; thickening the fluid, and contracting all the ſolid parts which it touches, and deſtroying, at leaſt for a time, their uſe and office: if the quantity taken is conſiderable, a palſy, or apoplexy, follows, and ſpeedily proves mortal.

Proof ſpirits, and ſuch as are diluted below the proof ſtrength, have the ſame effects in a lower degree. Externally they are of uſe in corroborant, anodyne, and antiſeptic fomentations. Taken inwardly, in ſmall quantity, they ſtrengthen lax fibres, incraſſate thin fluids, and warm the habit: in larger quantity, they diſorder the ſenſes, deſtroy voluntary motion, and produce, like the rectified ſpirit, a mortal apoplexy or palſy. —Vinous ſpirits, therefore, in ſmall quantity and properly diluted, may be applied to uſeful purpoſes in the relieving of ſome diſorders; whilſt in larger ones, or imprudently continued, they act as a poiſon of a particular kind. Their moderate uſe is the moſt ſerviceable to thoſe, who are expoſed to heat and moiſture, to corrupted air, or other cauſes of colliquative and putrid diſeaſes; the moſt pernicious in the oppoſite circumſtances, and to thoſe who are afflicted with hyſterical or hypochondriacal complaints; for whatever temporary relief theſe ſpirituous cordials may afford in the lowneſſes to which hyſterical and hypochondriacal perſons are ſubject, we entirely agree with Dr. Pemberton, that there are none who feel ſo ſoon the ill effects ariſing from their habitual uſe.

SPONGIA.

SPONGIA Pharm. Lond. & Edinb. SPONGE: a ſoft, light, very porous and compreſſible ſubſtance, readily imbibing water; found in the ſea, adhering to rocks, particularly in the Mediterranean, about the iſlands of the Archipelago. It has been commonly ſuppoſed a vegetable production, but is more probably, like the corallines, of animal origin. Chemically analyſed, it yields, like animal ſubſtances, a volatile alkaline ſalt, and this even in larger quantity than I have obtained from any of the other animal matters except the bags of the ſilk-worm: the caput mortuum, incinerated, yields alſo a large proportion of fixt ſalt, not however an alkaline one like that of vegetables, but chiefly of the marine kind: a like ſalt is obtainable by boiling the ſponge in water without burning.

Dry ſponge, from its property of imbibing and ſwelling by moiſture, is ſometimes uſed as a tent for dilating wounds and ulcers: for this purpoſe, after being carefully freed from the ſmall ſtones generally lodged in it, it is dipt in melted wax, and the wax ſqueezed out from it in a preſs †. * It has alſo been found to be the moſt efficacious of all thoſe

† Spongia præparata *Ph. Pariſ.*

ſubſtances which have been employed to ſuppreſs hemorrhagies on the ground of their ſtrong adheſion to the mouths of the wounded veſſels; ſuch as agaric, puff ball, *&c.* For this purpoſe, a very dry and ſolid piece, of a cubical or conical form, ſhould be applied in cloſe contact with the veſſel, and retained by proper compreſſion. It ſoon adheres with great force; and indeed its difficult removal is one of its chief inconveniencies. Very large arteries have been prevented from bleeding by this application *(a)*.

† Spongia uſta *Pharm. Lond. & Ed.*

Burnt in a cloſe earthen veſſel, till it becomes black and friable †, it has been given in doſes of a ſcruple againſt ſcrophulous complaints and cutaneous defedations; in which it has ſometimes been of ſervice, in virtue, probably, of its ſaline matter, the proportion of which, after the great reduction which the other matter of the ſponge has ſuffered in the burning, is very large. By virtue of this ſaline matter alſo, the preparation, if ground in a braſs mortar, corrodes ſo much of the metal, as to contract a diſagreeable taint and ſometimes an emetic quality: hence the college expreſſly orders it to be powdered in a mortar of glaſs or marble. * The burned ſponge is a principal article in what is called the Coventry method of cure in the bronchocele, and alſo in that publiſhed by Mr. Proſſer *(b)*.

STANNUM.

STANNUM Pharm. Lond. & Edinb. TIN: a ſilvered coloured metal, not liable to ruſt, but loſing its brightneſs in the air; eaſily flexible, and making a crackling noiſe in being bent; little more than ſeven times ſpecifically heavier than water; fuſible in a heat far below ignition, and ſomewhat leſs than that in which lead melts. Heated till almoſt ready to melt, it proves extremely brittle, ſo as to fall in pieces from a blow. Melted, and nimbly agitated at the time of its beginning to congeal (as by ſhaking in a wooden box rubbed on the inſide with chalk) it is reduced partly, and by repetitions of the proceſs totally, into powder. Continued in fuſion for ſome time, and kept ſtirring with an iron rod, it changes into a duſky calx; which, urged longer in the fire, gains a perfect whiteneſs, a mark of the purity of the tin. It is corroded

Stannum pulveratum *Pharm. Lond.* Stanni pulvis *Ph. Edin.*

(a) See White's *Caſes in Surgery.*

(b) See Wilmer's *Caſes in Surgery,* and Proſſer *on the Bronchocele.*

by vegetable acids, and renders them turbid and whitiſh: the nitrous acid pretty readily diſſolves it, but ſoon depoſites a part in form of a thick mucilage, eſpecially if the acid has any admixture of the vitriolic: the vitriolic and marine acids are very difficultly made to act upon it: its moſt perfect menſtruum is a mixture of the marine and nitrous.

The principal uſe of this metal in the preſent practice is as an anthelmintic: even the flat worms, which too often elude the force of other medicines, are ſaid to be effectually deſtroyed by powdered tin. The common doſe of the powder is from a ſcruple to a dram, but Dr. Alſton affirms, in the Edinburgh medical eſſays, that its ſucceſs depends chiefly on its being given in much larger quantities, as half an ounce or an ounce. It is poſſible, that the anthelmintic virtues of tin may proceed, not ſo much from the pure metal, as from a certain ſubſtance of a different nature, which there are grounds to ſuſpect that the pureſt ſorts of tin uſually met with, participate of; filings of tin, held in the flame of a candle, emit a thick fume ſmelling like garlick: Mr. Marggraf reports(a), that by gentle diſſolution in aqua regis and ſlow evaporation, he obtained cryſtals, which on being expoſed to the fire, with the addition of ſome fixt alkaline ſalt to abſorb their acid, ſublimed into a white concrete; and that this exhaled in the fire in fumes of a ſtrong garlick ſmell, formed with ſulphur yellow and red compounds, and whitened copper (ſee *Arſenicum)*. It muſt be obſerved, however, that notwithſtanding theſe ſtrong preſumptions, not to ſay proofs, of an arſenical impregnation in tin, the metal taken in ſubſtance has not been obſerved to be noxious, though the fumes which it emits in a red heat are undoubtedly ſo.

A ſparkling gold-coloured preparation of tin, called moſaic gold, is prepared by adding ſix ounces of quickſilver to twelve of melted tin, pulverizing the maſs when grown cold, mixing with it ſeven ounces of flowers of ſulphur and ſix of ſal ammoniac, and ſubliming in a matras: the moſaic gold is found under the ſublimed matter, with ſome droſs at the bottom. This preparation is chiefly valued for its beautiful appearance: as a medicine it is at preſent little regarded, though formerly held in conſiderable eſteem againſt hyſterical and hypochondriacal complaints,

Aurur. muſivum *Ph. L.*

(a) *Memoires de l'acad. roy. des ſciences de Berlin, tom.* iii.

plaints, malignant fevers, and venereal diſorders. It appeared, upon experiment, to be little more than a calx of tin: tin, calcined by itſelf, gains nearly as much in weight, as it does by being made into moſaic gold; and the moſaic gold, melted with inflammable fluxes, is revived into tin again without ſuffering much more loſs than the ſimple calx. The volatile ingredients, ſal ammoniac, ſulphur, and quickſilver, ſublime in the proceſs, partly eſcaping, and partly forming the ſcoriæ: great part of the ſulphur and mercury are found united together into the form of cinnabar.

Sal Jovis. A ſalt of tin is directed to be prepared, from twelve ounces of calx of tin and four of aqua regia diluted with twenty-four of water: after digeſtion for two days, the veſſel is to be ſhaken, the more ponderous part of the undiſſolved calx ſuffered to ſettle, the turbid liquor poured off and evaporated nearly to dryneſs, and the maſs further exſiccated on brown paper: to the remaining calx, half the quantity of freſh menſtruum is to be added, and the proceſs repeated. Of the virtues of this ſalt I can ſay nothing from experience, except that it is in taſte very ſharp and almoſt corroſive. Nor do I apprehend the uſe of calcining the metal, as tin uncalcined diſſolves much more eaſily and more plentifully: the ſolution is in both caſes the ſame, the fire in the calcination diſſipating only the inflammable principle of the tin, which the acid equally does in the ſolution and evaporation. Hoffman ſays, that ſolution of tin is a ſtrong purgative.

STAPHISAGRIA.

STAPHISAGRIA Pharm. Edinb. (a) *& C. B. Staphys, pedicularia, & herba pedicularis quibuſdam. Delphinium Staphyſagria Linn.* STAVESACRE: a plant with large leaves, ſet on long pedicles, deeply divided into ſeveral ſegments; producing irregular blue flowers with a tail behind like thoſe of larkſpur, followed by pods containing large, rough, triangular, dark-coloured ſeeds. It is annual, a native of the ſouthern parts of Europe, from whence the ſhops have been generally ſupplied with the ſeeds.

(a) Expunged.

The ſeeds of ſtaveſacre have a diſagreeable ſmell, and a very nauſeous bitteriſh burning taſte. They were formerly employed ſometimes as a cathartic, in doſes of from twelve grains to a ſcruple: but they operate with ſo much violence both upwards and downwards, and are ſo liable not only to diſorder the bowels, but likewiſe to inflame the throat, that their internal uſe has been long laid aſide. They are now uſed only in external applications, for ſome kinds of cutaneous eruptions, and for deſtroying inſects. Their acrimony is extracted partially by water, totally by rectified ſpirit, and not elevated in diſtillation by either.

STOECHAS.

STOECHAS Pharm. Lond. Stœchas purpuræa C. B. Lavandula Stœchas Linn. FRENCH LAVENDER: a low ſhrubby plant, with ſmall oblong narrow leaves, bearing on the tops of the branches ſhort thick ſpikes or ſcaly heads, from which iſſue ſeveral ſmall purple labiated flowers, followed each by four ſeeds incloſed in the cup. It is a native of the ſouthern parts of Europe, common in our gardens, and flowers in May or June. The ſhops have been generally ſupplied, from Italy and the ſouth of France, with the flowery tops, often mouldy, and never equal to thoſe of our own growth.

The beſt ſtechas which we receive from abroad has no great ſmell or taſte; Pomet affirms, that ſuch as is to be met with in the ſhops of Paris is entirely deſtitute of both; whereas ours, both whilſt freſh and when carefully dried, has a pretty ſtrong aromatic ſmell, and a moderately warm pungent bitteriſh taſte. Diſtilled with water, it yields a conſiderable quantity of a pale-coloured fragrant eſſential oil: the remaining decoction is unpleaſantly bitteriſh and ſubaſtringent. With rectified ſpirit, it gives over nothing conſiderable, greateſt part of the active matter of the ſtechas being left in the extract. Both the herb itſelf and its preparations are much leſs grateful than lavender, with which it is ſuppoſed to have ſome agreement in virtue.

**STRAMONIUM.*

STRAMONIUM Pharm. Edinb. Solanum fœtidum, pomo ſpinoſo oblongo C. B. Datura Stramonium Linn. THORN-APPLE: an herbaceous plant, with a thick branched ſtalk, two or three feet high, large ſinuated indented leaves, and long tubular white or purpliſh flowers, ſucceeded by large, prickly, green, fleſhy ſeed-veſſels, which open at the end in four diviſions, and diſcloſe numerous black ſeeds. It is ſown in gardens, and ſometimes found wild among rubbiſh. It flowers in July.

This plant, which has been long known as a narcotic poiſon, has been introduced into the catalogue of medicines by Dr. Stœrck. An extract made from the expreſſed juice of the leaves is acrid and ſaline to the taſte, and yields cryſtals of nitre on ſtanding. This preparation given in doſes of from one to five grains twice or thrice a day, is ſaid to be a very powerful remedy in various convulſive and ſpaſmodic diſorders, epilepſy and mania. The accounts of other practitioners have confirmed that of the firſt introducer, and it has been received into ſome pharmacopœias.

An abridged account of its medicinal properties, with ſome inſtances of its efficacy, from a treatiſe printed at Upſal by Dr. Wedenberg, is to be met with in the *Med. Comment.* Vol. III. p. 18. An ointment prepared from the leaves has been found to give eaſe in external inflammations and hæmorrhoids.

Several inſtances are recorded of the bad effects of inadvertently eating the ſeeds of thorn-apple. Emetics and purgatives give the ſpeedieſt relief in theſe caſes, which it is ſometimes neceſſary frequently to repeat, as ſome of the ſeeds have been found to lodge a conſiderable time in the ſtomach.

STYRAX.

SOLID STORAX: an odoriferous reſin, exuding in the warmer climates from a middling-ſized tree *(ſtyrax folio mali cotonei C. B. Styrax officinale Linn.)* with leaves like thoſe of the quince, flowers like thoſe of the orange tree, and fruit like filberds; a native of Aſia, and, as is ſaid, of Italy. Two ſorts of this reſin have been commonly diſtinguiſhed in the ſhops.

1. *Storax in the tear:* not in ſeparate tears, or exceeding rarely, but in maſſes, ſometimes compoſed of whitiſh and pale reddiſh brown tears, and ſometimes of an uniform reddiſh-yellow or browniſh appearance;

unctuous and ſoft like wax, and free from viſible impurities. This is ſuppoſed to be the ſort which the ancients received from Pamphylia in reeds or canes, and which was thence named calamita.

2. *Common ſtorax:* in large maſſes, conſiderably lighter and leſs compact than the foregoing, and having a large admixture of woody matter like ſaw-duſt. This appears to be the kind intended by the London college, as they direct their *ſtyrax calamita* to be purified, for medicinal uſe, by ſoftening it with boiling water, and preſſing it out from the feces betwixt warm iron plates; a proceſs which the firſt ſort does not ſtand in need of. And indeed there is rarely any other than this impure ſtorax to be met with in the ſhops.

Styrax colatus *Ph. Lond.*

The writers on the materia medica in general prefer the pure ſtorax in the tear, and reject that which is mixed with woody matter. It appears however, upon compariſon, that this laſt, notwithſtanding its large proportion of impurities, is the moſt fragrant of the two: nor is it difficult to aſſign a reaſon for this ſuperiority, as the pure juice muſt have required, for its inſpiſſation to a firm conſiſtence, a longer expoſure to the ſun and air, and conſequently loſt more of its volatile parts, than when abſorbed and thickened by the woody ſubſtance.

Common ſtorax, infuſed in water, imparts to the menſtruum a gold yellow colour, ſome ſhare of its ſmell, and a ſlight balſamic taſte. It gives a conſiderable impregnation to water by diſtillation, and ſtrongly diffuſes its fragrance when heated, though it ſcarcely yields any eſſential oil. Hence, in the purification of it by ſtraining, it is apt to ſuffer a conſiderable loſs of its finer matter, which is partly diſſipated by the heat, and partly kept diſſolved by the water: a part of the ſtorax is likewiſe defended by the woody ſubſtance from the action of the preſs, and left behind among the feces. It may be purified rather more elegantly by means of rectified ſpirit, which readily diſſolves the fine reſin, leaving only the impurities and a little inert gummy matter: the ſpirit gently diſtilled off from the filtered reddiſh-yellow ſolution, brings over with it very little of the fragrance of the ſtorax; and the remaining reſin is more fragrant than the fineſt ſtorax in the tear which I have met with. The pure reſin, diſtilled without addition, yields, along with an empyreumatic oil, a portion of ſaline matter ſimilar to the flowers of benzoine; I have ſometimes alſo extracted from it a ſubſtance of the ſame nature by coction in water.

Storax is one of the moſt agreeable of the odoriferous reſins, of a mild taſte, of no great heat or pungency, nearly ſimilar, in its medical as in its pharmaceutic qualities, to benzoine and balſam of Tolu. It is not, however, much uſed in common practice, unleſs as an ingredient in ſome of the old compoſitions, and in an opiate pill to which it gives name in the ſhops.

Pil. e ſtyrace *Pharm. Lond.*

STYRAX LIQUIDA.

STYRAX LIQUIDA Pharm. Edinb. (a) LIQUID STORAX: a reſinous juice; obtained from a large tree with angular leaves like thoſe of the maple, and a round fruit compoſed of a number of pointed ſeed-veſſels, called by Ray *ſtyrax aceris folio*, by Linnæus *Liquidambar ſtyraciflua*, a native of Virginia and Mexico, and lately naturalized to our own climate. The juice called liquidambar is ſaid to exude from inciſions made in the trunk of this tree, and the liquid ſtorax to be obtained by boiling the bark or branches in water.

Two ſorts of liquid ſtorax are diſtinguiſhed by authors: one, the purer part of the reſinous matter that riſes to the ſurface in boiling, ſeparated by a ſtrainer, of the conſiſtence of honey, tenacious like turpentine, of a reddiſh or aſh brown colour, moderately tranſparent, of an acrid unctuous taſte, and a fragrant ſmell, faintly reſembling that of the ſolid ſtorax, but ſomewhat diſagreeable: the other, the more impure part, which remains on the ſtrainer, untranſparent, in ſmell and taſte much weaker, and containing a conſiderable proportion of the ſubſtance of the bark. What is moſt commonly met with under this name in the ſhops, is of a weak ſmell, and a grey colour, and is ſuppoſed to be an artificial compoſition.

Liquid ſtorax has been employed chiefly in external applications. Among us, it is at preſent almoſt wholly in diſuſe.

(a) Expunged.

SUCCINUM.

SUCCINUM.

SUCCINUM Pharm. Lond. & Edinb. Ambarum citrinum & electrum quibuſdam. AMBER: a ſolid, brittle, bituminous ſubſtance, dug out of the earth or found upon the ſea ſhores, moſt plentifully in Poliſh Pruſſia and Pomerania; of a white, yellow, or brown colour, ſometimes opake, and ſometimes very clear and tranſparent; of very little taſte; and ſcarcely any ſmell, unleſs heated or briſkly rubbed, in which circumſtances it yields a pretty ſtrong one, to moſt people agreeable.

Boiled in water, it neither ſoftens, nor undergoes any ſenſible alteration. Digeſted in rectified ſpirit, it imparts a yellowiſh or browniſh colour, a fragrant ſmell, and a bitteriſh aromatic taſte: by repetitions of the proceſs with freſh quantities of ſpirit, a conſiderable part of the amber by degrees diſſolves. The ſpirit, diſtilled off from the tinctures, is ſtrongly impregnated with their ſmell; nevertheleſs the remaining balſam, or ſoft extract, is found to be very ſtrong both in ſmell and taſte.

By alkalies, fixt and volatile, the vegetable, nitrous, and marine acids, it is ſcarcely at all acted upon: the vitriolic acid diſſolves it into a deep purple liquor, from which the amber is precipitated on the mixture of any other acid, or of water, or ſpirit of wine *(a)*.

The ſpirituous tincture and balſam are medicines of great efficacy in hyſterical diſorders, cachexies, the fluor albus, ſome rheumatic pains, and in debilities and relaxations in general: in ſome caſes of this kind they have taken place, after bark and other corroborants of the vegetable kingdom had been given with little effect. The ſpirit, which diſtils in concentrating the tincture, may be reſerved for extracting a freſh tincture, either from another parcel of amber, or from that which remained after the former extraction. It is ſaid that if a little vitriolic acid be previouſly combined with the ſpirit, it will diſſolve more of the amber than pure vinous ſpirits. The amber is ſometimes given alſo in ſubſtance, levigated into an impalpable powder, but does not appear to act with ſo much advantage in this form as in a diſſolved ſtate.

Succinum præparatum *Phar. Lond.*

This concrete, expoſed to the fire in open veſſels, melts into a black maſs, takes flame, emits a copious ſmoke, with a ſmell like that which ariſes from the finer kinds of pitcoal, and burns almoſt entirely away.

(a) See Stockar's *Specimen inaugurale de ſuccino.*

† Spiritus ſuccini *Ph. Lond.*

Diſtilled in a retort, it yields firſt an acidulous phlegm † intermingled with a thin limpid oil, which grows thicker and deeper coloured as the fire is increaſed: at length a browniſh ſaline matter ariſes into the neck of the retort, ſucceeded by a groſſer oil, and at laſt, in a great heat, by a black thick pitchy matter. About the time that the firſt oil begins to riſe, the amber melts in the retort, and, unleſs the heat be cautiouſly regulated, is apt to boil over into the receiver: to prevent this accident, ſome previouſly mix with the amber an equal quantity of clean ſand, which does not appear, however, to be of much uſe, for with due care the proceſs ſucceeds equally without as with it.

‡ Sal ſuccini *Ph. L. & Ed.*

The ſalt is purified from its adhering oil, either by ſublimation, or by repeated ſolution, filtration, and cryſtallization ‡. When perfectly pure, it is of a white colour, and of a penetrating gratefully acid ſubaſtringent taſte. It diſſolves in rectified ſpirit ſparingly by the aſſiſtance of heat, not at all in the cold. Of cold water, in the common temperate ſtate of the atmoſphere, it requires for its ſolution above twenty times its own weight; of boiling water, only about twice its weight: in ſlow cooling, it ſhoots into triangular priſmatic cryſtals, with the points obliquely truncated. In the heat of boiling water, it does not exhale, or ſuffer any viſible alteration: in a greater one, it firſt melts, then riſes in white fumes, and concretes again in the upper part of the glaſs into fine white flakes; leaving behind a ſmall quantity of a dark coaly matter. It efferveſces with alkalies and abſorbent earths, and forms with them compound ſalts ſomewhat reſembling thoſe made with vegetable acids, its acid matter ſeeming to have a conſiderable analogy to the acids of the vegetable kingdom, and being eſſentially diſtinct from the three called mineral acids *(a)*: mixed with acids, it makes no ſenſible commotion. By theſe characters this ſalt may be diſtinguiſhed from all the other matters that have been mixed with or vended for it. With regard to its virtues, it is accounted aperient, diuretic, and antihyſteric: its great price has prevented its coming much into uſe, and probably its real virtues, though doubtleſs conſiderable, fall greatly ſhort of the opinion that has been generally entertained of them.

Ol. ſuccini || *Ph. Edinb.* § *Ph. Lond.*

The oil ||, diſtilled again by itſelf, is divided into a thinner oil which ariſes §, and a thicker part, which remains behind, called balſam of

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(a) See Neumann'*s chemical works, p.* 237, *and* Stockar'*s ſpecimen.*

amber†: ſome diſtil it from brine of ſea ſalt, or from plain water‡, by which it becomes purer than when diſtilled without addition. This oil has a ſtrong bituminous ſmell, and a hot pungent taſte; and approaches more to the nature of the mineral petrolea than of the vegetable or animal diſtilled oils, being very difficultly, if at all, diſſoluble in vinous ſpirits. It is ſometimes given internally, in doſes of ten or twelve drops, as an antihyſteric and emmenagogue; and ſometimes employed externally in antihyſteric, paralytic, and rheumatic liniments or unguents.

† Balſamum ſuccini *P. L.*
‡ Ol. ſuccini rectificatum *Phar. Edin.*

SULPHUR.

SULPHUR Pharm. Lond. BRIMSTONE: a yellow concrete, of no taſte, and ſcarcely any ſmell; melting in a ſmall degree of heat into a viſcous red fluid, and totally exhaling on an increaſe of the heat; readily inflammable, and burning with a blue flame and a ſuffocating acid fume.

It conſiſts of the vitriolic acid combined with a ſmall proportion of inflammable matter. If a combination of pure vitriolic acid with a pure fixt alkaline ſalt be melted in a cloſe veſſel with the addition of a little powdered charcoal, a true ſulphur will be produced, and the compound will be the ſame (excepting for the earthy part of the charcoal) as if the alkali had been melted with common brimſtone. And contrariwiſe, if a combination of alkaline ſalt with common brimſtone be reduced into powder, and roaſted with a gentle heat, the inflammable principle exhales, and the remainder proves the ſame as if the alkali had been combined with the pure vitriolic acid: the diminution of weight, reſulting from this avolation of the inflammable principle, does not exceed two drams upon ſixteen ounces of the ſulphur *(a)*.

Greateſt part of the ſulphur met with in the ſhops is either extracted from certain ores by a kind of diſtillation *(b)*; or prepared from minerals abounding with vitriolic acid, by ſtratifying them with wood, which being ſet on fire, the ſulphur is collected in cavities made in the upper part of the pile *(c)*. The largeſt quantities are brought from Saxony, in irregular maſſes, which are afterwards melted and caſt into cylindrical rolls. Sulphur is found likewiſe native in the earth; ſometimes in

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(a) Vide Stahlii *Menſis Julius, Experimenta & animadverſiones ccc, &c.*

(b) Leopold, *Relatio de itinere ſuo Suecico.*

(c) Hoffman, *Obſervationes phyſico-chemicæ, lib.* iii. *obſ.* 9.

tranſparent pieces, of a greeniſh or bright yellow colour; more commonly in opake grey ones with only ſome ſtreaks of yellow: this laſt is the ſort which is underſtood by the name *ſulphur vivum*, though what is ſold under this name in the ſhops is no other than the droſs which remains after the ſublimation of ſulphur. The native ſulphurs ſhould never be employed for any internal uſe without purification: they almoſt always participate of arſenic, which is diſcoverable in ſome by their having naturally more or leſs of a red colour, and in the others by their exhibiting this colour after a part of the pure ſulphur has been ſeparated by ſublimation.

Sublimation is the moſt effectual method of purifying ſulphur from arſenical as well as earthy admixtures; and by the ſame proceſs it is reduced into a fine powder, ſomewhat of a ſofter kind than that obtained by triture. Thoſe who prepare the flowers in the way of trade, uſe for the ſubliming veſſel a large iron pot, capable of holding two or three hundred weight: this is placed under an arched chamber, lined with glazed tiles, which ſerves for the recipient. Some ſmall portion of ſulphur that riſes firſt, eſpecially when the veſſels are very large, or the air not ſufficiently excluded, is apt to take fire, and give out its acid, which adhering to the flowers that ſublime afterwards, communicates to them a ſenſible acidity or roughneſs; in conſequence of which, they are ſometimes found to coagulate milk, when taken internally to produce gripes, and to receive from ſome metalline veſſels a diſagreeable taint: hence the London college directs ſuch of the flowers, as may happen to concrete or melt together from the vicinity of the receiver to the fire, to be reduced to powder, not with metalline inſtruments, but either in a wooden mill, or in a marble mortar with a wooden peſtle †. From this extraneous or ſuperficial acid they are freed, by boiling them in water, and afterwards carefully waſhing them with cold water ‡.

Flor. ſulph. *Phar. Edin.*

† Flor. ſulph. *Pharm. Lond.*

‡ Flor. ſulph. loti *Ph. L.*

Pure ſulphur, taken in doſes of from ten grains to a dram or more, gently looſens the belly, and promotes perſpiration. It ſeems to paſs through the whole habit; and manifeſtly tranſpires through the ſkin, as appears from the ſulphureous ſmell of perſons who have taken it, and ſilver being ſtained in their pockets to a blackiſh hue as by the vapour of ſulphureous ſolutions. In conſequence of theſe properties, and of this ſubtility of parts, it promiſes to be of great medicinal powers;

but what its particular virtues are, experience has not as yet clearly determined. It is principally recommended againſt the piles, in diſorders of the breaſt, and in cutaneous eruptions: in the itch indeed it is a certain remedy, whether internally or externally uſed, but in other kinds of eruptions it has not equally ſucceeded, and perhaps its efficacy againſt the firſt depends not ſo much on its purifying the blood, as on its fumes being deſtructive to the cuticular animalcules to which the preſent theory aſcribes that diſtemper. It remarkably corrects or reſtrains the power of certain mineral ſubſtances of the more active kind: by the admixture of ſulphur, mercury becomes inert, the virulent antimonial regulus mild, and arſenic itſelf almoſt innocent: hence though ſulphur ſhould contain a ſmall proportion of arſenic, it poſſibly may not receive from that poiſonous ingredient any very hurtful quality.

This concrete is not acted on by water, by acids, or by vinous ſpirits; but diſſolves, by the aſſiſtance of heat, in oils both expreſſed and diſtilled, and in the mineral petrolea: when diſſolved, it yields a very offenſive ſmell, and diſcovers to the taſte a nauſeous pungency and heat. Expreſſed oils and petroleum diſſolve it more readily and more plentifully than the diſtilled, taking up ſo much as to become thick and almoſt conſiſtent: the college of London directs one part of flowers of ſulphur and four of oil-olive †, and the ſame proportions of the flowers and of the petroleum called Barbadoes tar ‡, and that of Edinburgh one ounce of the flowers and eight ounces of oil-olive ||, to be boiled together till they unite into the conſiſtence of a balſam. Eſſential oils do not load themſelves ſo much with the ſulphur as to become thick. As ſoon as the ſulphur begins to be ſtrongly acted on either by expreſſed or eſſential oils, which happens nearly about the point of ebullition, or in ſuch a heat as the ſulphur by itſelf would melt in, the matter rarefies and ſwells up greatly, ſo as to require the veſſel to be very large and occaſionally removed from the heat; and at the ſame time throws out impetuouſly great quantities of an elaſtic vapour, which, if a free exit is not allowed it, produces violent exploſions. The volatile flavour of the eſſential oils is in great meaſure diſſipated in this proceſs by the great heat requiſite for effecting the ſolution: a more elegant compoſition of this kind might be obtained by adding to the eſſential oil a proper quantity of the balſam made with expreſſed oils, which will unite with it by a gentle warmth. The balſams of ſulphur have been employed externally for cleanſing and

Balſ. ſulph.
† ſimplex.
‡ barbadenſe.
|| craſſum.

healing foul running ulcers. They are recommended internally in ſome cachectic and hydropic caſes; as alſo in coughs and conſumptions, in which they promiſe, by their manifeſt heat and acrimony, to be oftener injurious than beneficial: they have been frequently obſerved to hurt the appetite, and excite febrile ſymptoms.—It may be obſerved, that in theſe ſolutions the component parts of the ſulphur are in ſome meaſure diſunited from one another; inſomuch that a conſiderable quantity of ſulphureous acid, but no actual ſulphur, ſeparates in diſtillation.

Hepar ſulphuris.

Tinctura ſulphuris.

Syrupus ſulphuris.

Fixt alkaline ſalt, ſtirred by little and little into twice [or rather half] its weight of ſulphur in fuſion, unites with it into a red maſs called from its colour *liver* of ſulphur. This compound has a fetid ſmell, and a nauſeous taſte: it diſſolves in water, and deliquiates in the air, into a yellow fluid: thrown, whilſt hot from the fire, into rectified ſpirit of wine, in the proportion of about four ounces to a pint, and digeſted about twenty-four hours, it communicates a rich gold colour, a particular not ungrateful ſmell, and a hot ſomewhat aromatic taſte. Solutions of the liver in water, made with ſugar into a ſyrup; and a few drops of the tincture mixed with a glaſs of canary or other rich wine, to which it communicates a milky hue; have been ſometimes given in the ſame intentions as the balſams, and ſeem to be accompanied with the ſame inconveniencies.

Flowers of ſulphur may be diſſolved in water by boiling them with thrice their weight of quicklime, though not ſo readily as by alkaline ſalts. If the filtered ſolution be long expoſed to the atmoſphere, or if air from the lungs be blown into it for a ſhort time through a glaſs pipe, the lime gradually ſeparates, as it does from common lime-water; and the ſulphur, which was diſſolved by means of the lime, ſeparates and precipitates along with it. Common alkalies, fixt or volatile, added to the ſolution of ſulphur in lime-water, occaſion a precipitation of the lime, the ſulphur continuing diſſolved: cauſtic alkalies make no precipitation.

On adding to the ſulphureous ſolution, whether made by lime or by alkalies, ſome of the weak ſpirit of vitriol, (or any other acid) the liquor becomes milky, an extremely fetid and diffuſive inflammable vapour ariſes, and on ſtanding for ſome time the ſulphur ſettles to the bottom in form of a white powder, which, when waſhed with freſh quantities of water, becomes inſipid and inodorous, and is vulgarly called *lac* or milk of ſulphur: the liquor after the precipitation retains ſtill a ſulphureous impregnation, which further additions of acid will not precipitate. The method of preparing the lac with fixt alkalies is the moſt expeditious and leaſt troubleſome, provided the ſulphur has been thoroughly united with a ſufficient quantity of the alkali; and on the other hand, quicklime † gives the preparation a more ſaleable whiteneſs. The medicine proves in either caſe nearly the ſame: it would be exactly the ſame if the precipitation was made with any other acid than the vitriolic; which forms with the diſſolved lime a ſelenitic concrete, not ſeparable from the lac by any ablution, but with the alkali a neutral ſalt, which by hot water may be totally diſſolved and waſhed off; whereas the combinations of all the other acids, with lime as well as with alkalies, are eaſily diſſoluble even in cold water. The pure lac is not different in quality from pure ſulphur itſelf; to which it is preferred, in external applications, only on account of its colour. The whiteneſs does not proceed from the ſulphur having loſt any of its parts in the operation, nor from any new matter ſuperadded: on being melted with a gentle fire, it reſumes its yellow hue.

† Sulphur præcipitat. *Phar. Lond.*

A ſolution of ſulphur in volatile alkaline ſpirits may be obtained, by boiling half a pound of flowers of ſulphur with a pound of quicklime, in a gallon of water, till half the liquor is waſted; then putting the remainder into a retort, with eight ounces of powdered ſal ammoniac, and diſtilling with a gradual fire. The ſpirit comes over loaded with the ſulphur, and has a ſtrong offenſive ſmell, ſomewhat reſembling that which riſes in the precipitation of the lac. Hoffman ſays, a mixture of it with thrice its quantity of ſpirit of wine, given in doſes of thirty or forty drops, proves a powerful diaphoretic; and that applied externally as a fomentation, with the addition of camphor, it alleviates gouty pains.

Tinct. ſulph. volatilis *vulgo*.

The flowers of ſulphur in ſubſtance ſeem to be preferable for internal uſe to any of the preparations: they are certainly more ſafe, and perhaps not leſs effectual; as they do not heat or irritate the firſt paſſages, and yet are evidently diſſolved in the body and carried through the habit. They are moſt commodiouſly taken in the form of troches: the college of London directs for this purpoſe two ounces of the waſhed flowers, and four of double refined ſugar, to be beaten together, and made up with mucilage of quince ſeeds; that of Edinburgh, one ounce of the flowers of ſulphur, ten grains of flowers of benzoine, fifteen grains of factitious cinnabar, and two ounces of fine ſugar, to be formed with mucilage of gum tragacanth: by the addition of the flowers of benzoine in this laſt

Trochiſci e ſulphure *Phar. Lond.*

Trochiſci e ſulphure *ſive* diaſulphuris *Phar. Edinb.*

preſcription, the medicine is ſuppoſed to be rendered more efficacious in ſome diſorders of the breaſt.

Unguentum e ſulphure † *Ph. Lond.* *ſive* anti-pſoricum ‡ *Ph. Edin.*

A ſulphureous ointment, for the itch, is prepared, by mixing two ounces of the unwaſhed flowers, with ſix † or eight ‡ ounces of the ſimple ointment called pomatum †, or of hogs-lard ‡, and a ſcruple of eſſence of lemons. Half this quantity is, in moſt caſes, ſufficient for a cure; though it may be proper to renew the application, and touch the parts moſt affected, for ſome nights longer, till the whole quantity is exhauſted. Some have been of opinion, that this external uſe of ſulphur is unſafe; that as ſulphur taken inwardly promotes the expulſion of impure humours and the eruption of cutaneous eflloreſcences, it muſt act, when outwardly applied, by repreſſing them. This conſequence, however, does not follow; nor is it by affecting the humours that it performs the cure: for it equally removes the itch, whether uſed internally or externally, by its vapours diffuſed through the ſkin. All the danger, that is to be apprehended from ſulphureous unguents, is that which may ariſe from the obſtruction of the cutaneous pores by the unctuous matter; and to prevent any diſorders from this cauſe, only a part of the body is to be anointed at one time.

SUMACH.

SUMACH ſive Rhus obſoniorum Pharm. Edinb. (a) *Rhus folio ulmi C. B. Rhus coriaria Linn.* SUMACH: a ſhrub or low tree; with oval, pointed, ſerrated, downy leaves, having each a red rib running along the middle, ſet in pairs without pedicles; producing cluſters of ſmall yellowiſh or greeniſh flowers, each of which is followed by a ſmall, red, flattiſh berry, including a roundiſh reddiſh-brown ſeed. It is a native of the ſouthern parts of Europe, and cultivated in ſome of our gardens.

THE berries of ſumach have an acid auſtere taſte: they were formerly uſed for reſtraining bilious fluxes, and hemorrhagies, and colliquative hectic ſweats: ſome direct an infuſion of half an ounce of the berries, and others two or three drams of an extract made from them by water, for a doſe. The leaves and young twigs are ſtrong aſtringents, and have been directed in the ſame intentions.

(a) Expunged.

TACAMAHACA.

TACAMAHACA Pharm. Edinb.(a) A reſin; obtained from a tree, reſembling the poplar, *(Populus balſamifera Linn.)* bearing, at the extremities of the branches, ſmall roundiſh fruits including a ſeed like a peach-kernel; a native of the temperate parts of the continent of America, and in a ſheltered ſituation enduring the winters of our own country.

Two ſorts of this reſin are ſometimes to be met with. The beſt, called, from its being collected in a kind of gourd-ſhells, tacamahaca in ſhells, is ſomewhat unctuous and ſoft, of a pale yellowiſh or greeniſh colour, a bitteriſh aromatic taſte, and a fragrant delightful ſmell approaching to that of lavender and ambergris. This ſort is very rare. That commonly found in the ſhops is in ſemitranſparent grains or glebes, of a whitiſh, yellowiſh, browniſh, or greeniſh colour, and of a leſs grateful ſmell than the foregoing. The firſt is ſaid to exude from the fruit of the tree, the other from inciſions made in the trunk. The tree, as raiſed among us, affords in its young buds, or the rudiments of the leaves, a reſinous juice of the ſame kind of fragrance *(b)*.

Tacamahaca is uſed chiefly as an ingredient in warm nervine plaſters; though the fragrance and taſte of the finer ſort points out its being applicable to other purpoſes, as an internal balſamic corroborant. Both kinds diſſolve in rectified ſpirit into a gold-coloured liquor, only a ſmall quantity of impurities being left: they impregnate water alſo conſiderably with their ſmell and taſte, but give out very little of their ſubſtance to this menſtruum.

TALCUM.

TALC: an earthy concrete; of a fibrous or leafy texture; more or leſs pellucid, bright or glittering; ſmooth and ſlippery to the touch; in ſome degree flexible and elaſtic, ſo as ſcarce to be pulverable; ſoft, ſo as to be eaſily cut; ſuffering no change in an intenſe fire, or no other than a diminution of its brightneſs, flexibility, and unctuoſity; not acted upon by acids, either in its crude ſtate, or after vehement calcination. There are ſeveral different appearances of this earth; among which, the

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(a) Expunged. *(b)* See article *Populus.*

greeniſh foliaceous *Venice talc* has been ſelected for medicinal uſe; though it does not appear capable of anſwering any medicinal intention, as not being diſſolved, or ſenſibly affected, by any known humid menſtruum: on account of its unctuous ſoftneſs, and the ſilver hue which it exhibits when reduced by raſping or otherwiſe into powder, it has been employed externally as a coſmetic. The fibrous flexible *amianthus* or *aſbeſtos*, and the more rigid fibrous *alumen plumoſum*, ſeem to approach to the nature of the talcs, and made an equally inſignificant addition to the articles of the materia medica in our former pharmacopœias.

TAMARINDUS.

TAMARINDUS Ph. Lond. & Ed. Oxyphœnicon. TAMARIND: the fruit of a pretty large tree, *(ſiliqua arabica quæ tamarindus C. B. Tamarindus indica Linn.)* growing in Arabia and in the Eaſt and Weſt Indies. The fruit is a pod, ſomewhat reſembling a bean-cod, including ſeveral hard ſeeds, together with a dark-coloured viſcid pulp: the Eaſt India tamarinds are longer than thoſe of the Weſt, the former containing ſix or ſeven ſeeds each, the latter rarely above three or four: they nevertheleſs ſeem both to be the produce of one ſpecies of plant. The pulp, with the ſeeds, connected together by numerous tough ſtrings or fibres, are brought to us freed from the outer ſhell: the oriental ſort is dryer and darker coloured than the occidental, and has more pulp: the former is ſometimes preſerved without addition, the latter has always an admixture of ſugar.

THE pulp of tamarinds is an agreeable laxative acid; of common uſe in inflammatory and putrid diſorders, for abating thirſt and heat, correcting putrefaction, and looſening the belly. The doſe, as a laxative, is two or three drams: an ounce or two prove moderately cathartic. It is an uſeful addition to the purgative ſweets, caſſia and manna, increaſing their action, and rendering them leſs liable to produce flatulencies: the reſinous cathartics are ſaid to be ſomewhat weakened by it. Tournefort relates that an eſſential ſalt may be obtained from tamarinds, by diſſolving the pulp in water, and ſetting the filtered ſolution, with ſome oil upon the ſurface, in a cellar for ſeveral months; that the ſalt is of a ſouriſh taſte, and difficultly diſſoluble in water; and that a like ſalt is ſometimes found alſo naturally concreted on the branches of the tree. The ſalt, as Beaumé obſerves, may be obtained more expeditiouſly, by clarifying the decoction of the tamarinds with whites of eggs, then filtering and evaporating it to a proper conſiſtence, and ſetting it to cool: the ſalt ſhoots into cryſtals, of a brown colour, and very acid taſte; but in diſſolving and cryſtallizing them again, or barely waſhing them with water, they loſe almoſt all their acidity, the acid principle of the tamarinds ſeeming not to be truly cryſtallizable.

TANACETUM.

TANACETUM Pharm. Lond. & Edinb. Tanacetum vulgare luteum C. B. Tanaſia, athanaſia, & parthenium mas quibuſdam. Tanacetum vulgare Linn. TANSY: a plant with large leaves, divided to the rib, on both ſides, into oblong deeply indented ſegments; producing, on the tops of the ſtalks, ſeveral gold-coloured diſcous flowers, in umbel-like cluſters, followed by ſmall oblong blackiſh ſeeds. It is perennial, grows wild by road-ſides and about the borders of fields, and flowers in June and July.

THE leaves and flowers of tanſy have a ſtrong, not very diſagreeable ſmell, and a bitter ſomewhat aromatic taſte: the flowers are ſtronger though rather leſs unpleaſant than the leaves. They give out their virtue both to water and ſpirit, moſt perfectly to the latter: the tincture, made from the leaves, is of a fine green, from the flowers of a bright pale yellow colour. Diſtilled with water, they yield a greeniſh-yellow eſſential oil, ſmelling ſtrongly of the herb: the remaining decoction, inſpiſſated, affords a ſtrong bitter ſubſaline extract. The ſpirituous tinctures give over alſo, in inſpiſſation, a conſiderable part of their flavour *(a); a part of it remaining, along with the bitter matter, in the extract.

This plant is uſed as a warm deobſtruent bitter, in weakneſs of the ſtomach and in cachectic and hyſteric diſorders; and likewiſe as an anthelmintic. The ſeeds have been chiefly recommended in this laſt intention, and ſuppoſed by ſome to be the *ſantonicum* of the ſhops, from which they differ not a little in quality as well as in appearance, being much leſs bitter, and of a more aromatic flavour.

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*(a) Alcohol, diſtilled from tanſy, proved, after ſtanding for upwards of fifteen years, richly impregnated with the flavour of the plant, and ſufficiently grateful. *M. S. of Dr. Lewis.*

TARTARUM.

TARTARUM vini albi vel rubri Pharm. Lond. Tartar: an acid concrete ſalt thrown off from wines, after complete fermentation, to the ſides and bottoms of the caſks; of a red or white colour, and more or leſs droſſy, according to the colour and quality of the wine. The white is generally purer than the red: both kinds, when purified, are exactly the ſame.

This ſalt is one of thoſe which are moſt difficultly diſſoluble in water, being ſcarcely affected by it in the cold, and requiring ten or twelve times its own weight when aſſiſted by a boiling heat. From this ſaturated ſolution the tartar begins to ſeparate almoſt as ſoon as the boiling ceaſes: if the quantity of water is greater, as about twenty times the weight of the ſalt, it continues long enough ſuſpended to be paſſed, with due care, through a woollen ſtrainer or a filter. The filtered liquor appears nearly colourleſs, whether the tartar made uſe of was red or white: if haſtily cooled, the ſalt ſeparates in ſmall grains like ſand, but if the veſſel is cloſely covered, and the heat very leiſurely diminiſhed, it ſhoots into ſemitranſparent whitiſh *cryſtals*: if the filtered liquor be kept boiling, a thick ſkin forms on the ſurface, which, being taken off with a perforated wooden ſkimmer, is ſucceeded by freſh cuticles, till the whole of the ſalt is thus formed into what is called *creme* of tartar. The refining of tartar is practiſed, in the way of trade, chiefly about Montpellier, from whence the ſhops are generally ſupplied both with the cryſtals and creme; the proceſs being ſo troubleſome, and requiring ſo large conveniencies, that it is ſcarcely ever attempted here. A certain earth, of the argillaceous kind, is added in the proceſs, the chief uſe of which ſeems to be, to promote the ſeparation of the colouring matter; for the ſalt extracted from the coloured tartars by water only is ſeldom of perfect whiteneſs. It is ſaid that the earth generally contains ſome ſmall portion of chalky matter, ſoluble in acids, which of conſequence will be taken up by the tartar; I have ſometimes obſerved

Cryſtalli tartari *Phar. Lon. & Edin.*

Cremor tartari.

obſerved ſolutions of the cryſtals to depoſite an earthy precipitate on adding alkaline lye. The purer ſort of white tartar, unrefined, eſpecially that of Rheniſh wine, is, for many purpoſes, particularly for combinations with other bodies, not inferiour either to the creme or cryſtals.

Pure tartar, in doſes of half a dram or a dram, is a mild cooling aperient: two or three drams gently looſen the belly; and ſix or eight prove moderately cathartic. Its acidity and laxative power are its medical characters.

* The difficult ſolubility of creme of tartar being an objection to its medical uſe, ſome experiments were made by Dr. Peter Jonas Berg, for rendering it more ſoluble by certain additions, without altering its medicinal qualities. Borax was found to anſwer beſt for this purpoſe. To four parts of creme of tartar, one of borax was added. Theſe were diſſolved in a ſufficient quantity of water, and the liquor ſtrained. About a ſixteenth part of impurities were left behind. The pure ſolution evaporated yielded an acid and extremely ſoluble white ſalt *(a)*.

Tartar, diſſolved in water, effervеſces with fixt alkaline ſalts, and ſaturates, of the vegetable alkalies, near one third its own weight. The compound ſalt, reſulting from their union, is a neutral one, more purgative than the tartar itſelf, and far eaſier of ſolution, whence its name ſoluble tartar. This ſalt is prepared, either by boiling the refined tartar in a ſufficient quantity of water till it is diſſolved, and then dropping in ſtrong alkaline lye; or by diſſolving the alkali in boiling water in the proportion of a pound to a gallon †, or to fifteen pounds ‡, and then adding the tartar, till a freſh addition occaſions no further effervеſcence; which generally happens before triple the weight of the alkali is thrown in: the liquor is then filtered while hot, and either cryſtallized or evaporated to dryneſs. As this ſalt difficultly cryſtallizes, inſpiſſation to dryneſs is the moſt convenient method; and in this caſe, to ſecure the neutralization of the ſalt, the tartar may be made to prevail at firſt, and the liquor ſuffered to cool a little before filtration, that the redundant tartar may concrete and ſeparate from it; or the neutralization may be more perfectly obtained by means of ſtained papers, as mentioned at the end of the article *Acetum*.

Tart. ſolubil.
† *Ph. Lond.* Alcali fixum vegetabile tartariſatum *vulgo* tart. ſolub. ‡ *Ph. Edinb.* Sal vegetabilis *quibuſd.*

(a) *Nova Acta Phyſico-Medica Academiæ Cæſareæ Leopoldino-Carolinæ Naturæ Curioſorum, tom. quart.*

Soda tartariſata *vulgo* ſal rupellenſis *Ph. Edinb.* Sel de Seignette, Rochelle ſalt.

Of the mineral fixt alkali or ſoda, this acid ſaturates, according to the faculty of Paris, four fifths its own weight. The neutral ſalt reſulting from its coalition with this alkali, is ſomewhat leſs diſſoluble than that with the vegetable; and ſhoots much more eaſily, into pretty large, hard, multangular cryſtals, ſome columnar and flattiſh, others more irregular. It is milder in taſte, and ſaid to be leſs purgative, requiring to be given to the quantity of an ounce or an ounce and a half to purge effectually: eight drams are reckoned by ſome to be equivalent, in cathartic power, to ſix of the ſoluble tartar.

Tartar forms likewiſe ſoluble compounds with all the abſorbent earths, and with ſome metallic bodies, but with theſe laſt it is difficultly made to ſatiate itſelf completely, the part that is firſt ſaturated ſeeming to impede the action of the reſt; for after long boiling, a very conſiderable part of the tartar ſeparates on cryſtallization unchanged.

It is obſervable, that if any of theſe combinations of tartar, with alkalies, with earths, or with metals, be diſſolved in water, and any other acid added, the pure tartar ſeparates and falls to the bottom, as acid, and as difficult of ſolution, as at firſt; the ſubſtance, that was combined with it, being abſorbed by the acid ſuperadded. As the acids of the vegetable kingdom, whether native or fermented, vinegar, lemon juice, *&c.* have this effect of diſuniting tartar from all the bodies that are combinable with it, equally with thoſe of the mineral kingdom; it follows, that the tartareous acid is of a kind eſſentially different from all the other known vegetable ones, and that no acid, unleſs it be tartar itſelf, can be joined in preſcription to the *tartarum ſolubile*, the *ſel de Seignette*, or the combinations of tartar with earths or metals.

* In the *Swediſh Tranſactions*, Part III. for the year 1770, was publiſhed an analyſis of creme of tartar by Mr. Scheele. By this it appears, that creme of tartar is not a pure acid, but a compound ſalt, containing the fixed vegetable alkali united with a ſuperabundance of the tartareous acid. It differs, therefore, from ſoluble tartar, only in the proportion of acid it contains.

TELEPHIUM.

TELEPHIUM: a plant with unbranched ſtalks, clothed with thick fleſhy oval leaves, but producing no leaves immediately from the root: the flowers ſtand in form of umbels on the top of the ſtalk, and are followed, each, by from three to ſix pods full of ſmall ſeeds: the root is irregular and knobby. It is indigenous in England, and perennial.

1. Crassula *ſive Telephium Pharm. Edinb.*(a) *Telephium vulgare C. B. Anacampſeros, fabaria, & faba craſſa quibuſdam. Sedum Telephium Linn.* Orpine: with the leaves very ſlightly or not at all ſerrated: growing in hedges and moiſt ſhady grounds, and producing reddiſh or whitiſh pentapetalous flowers in June. The leaves have been ſuppoſed to be poſſeſſed of an anti-inflammatory power; but their virtues appear to be very inconſiderable, as they have no ſmell, and only an herbaceous mucilaginous taſte.

2. Rhodiola *ſive roſea: Rhodia radix C. B.* Roſewort: with ſerrated leaves; growing in mountainous places, and producing yellow tetrapetalous flowers in the ſpring. The root of this ſpecies, of little ſmell when freſh, has when dry a very pleaſant one, reſembling, when the root is in perfection, that of the damaſk roſe: in this odorous matter conſiſts the medical virtue of the rhodiola, and its principal medical difference from the preceding ſpecies. Linnæus obſerves, that when raiſed in gardens, it has not one hundredth part of the ſmell or virtue of that which is produced on its native mountains.

TEREBINTHINÆ.

TURPENTINES: the native balſams or reſinous juices of certain trees. Four kinds are diſtinguiſhed by medical writers.

1. Terebinthina chia *Pharm. Lond.* Chio or Cyprus turpentine: generally about the conſiſtence of thick honey, very tenacious, clear and almoſt tranſparent, of a white colour with a caſt of yellow and frequently of blue, of a warm pungent bitteriſh taſte, and a fragrant ſmell more agreeable than that of any of the other turpentines. It is the produce of the common terebinth (*terebinthus vulgaris C. B. Piſtachia terebinthus Linn.*), an evergreen bacciferous tree or ſhrub, growing ſpon-

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(a) Expunged.

taneouſly in the eaſtern countries and in ſome of the ſouthern parts of Europe. The turpentine brought to us is extracted in the iſlands whoſe name it bears, by wounding the trunk and branches a little after the buds have come forth: the juice iſſues thin and clear as water, and by degrees thickens into the conſiſtence in which we meet with it. A like juice, exuding from this tree in the eaſt, inſpiſſated by a ſlow fire, is ſaid by Kæmpfer to be uſed as a maſticatory by the Turkiſh women, for preſerving the teeth, ſweetening the breath, and promoting appetite.

2. Terebinthina veneta *Pharm. Edinb.* Venice turpentine: uſually thinner than any of the other ſorts, of a clear whitiſh or pale yellowiſh colour, a hot pungent bitteriſh diſagreeable taſte, and a ſtrong ſmell, without any thing of the fine aromatic flavour of the Chian kind. The true Venice turpentine is ſaid to be obtained from the larch *(larix C. B. Pinus larix Linn.)*, a coniferous tree, with ſmall cones, and ſhort leaves ſtanding in tufts, which fall off in the winter, growing in great abundance on the Alps and Pyreneans, and not uncommon in the Engliſh gardens. Though this kind of turpentine bears the name of Venice, it is not the produce of the Venetian territories: it is brought from ſome parts of Germany, and one greatly reſembling it, as is ſaid, from New England. In the ſhops this turpentine is often ſupplied by a compoſition of roſin and the diſtilled oil of common turpentine.

3. Terebinthina argentoratensis *Pharm. Lond.* Straſburg turpentine: generally of a middle conſiſtence between the two foregoing, more tranſparent and leſs tenacious than either, in colour yellowiſh brown, in ſmell more agreeable than any of the other turpentines, except the Chian, in taſte the bittereſt yet leaſt acrid. This juice is extracted, in different parts of Germany, from the ſilver and red fir, by cutting out, ſucceſſively, narrow ſtrips of the bark, from as high as a man can reach to within two feet of the ground. In ſome places, a reſinous juice is collected from certain knots under the bark: this, called *lacryma abiegna* and *oleum abietinum*, is accounted ſuperiour to the turpentine. Neither this turpentine, nor any thing under its name, is at preſent common in the ſhops.

4. Terebinthina communis *Pharm. Lond.* Common turpentine: about the conſiſtence of honey, of an opake browniſh white colour, the

coarſeſt, heavieſt, in ſmell and taſte the moſt diſagreeable, of all the kinds of turpentine. It is obtained from the wild pine *(pinus ſilveſtris C. B. & Linn.)*, a low coniferous tree, with the leaves longer than thoſe of the firs and iſſuing two together from one tubercle, growing wild in the different parts of Europe. This tree is extremely reſinous, inſomuch that, if not evacuated of its juice, it often ſwells and burſts. The juice, as it iſſues from the tree, is received in trenches made in the earth, and afterwards freed from its groſſer impurities by colature through wicker baſkets. The cones of the tree appear to contain a reſinous matter, of a more grateful kind than that of the trunk: diſtilled while freſh, they are ſaid to yield a fine eſſential oil greatly ſuperiour to that of the turpentines.

Carpathicum oleum *Germanis.*

All theſe juices diſſolve totally in rectified ſpirit, but give out little to watery menſtrua: they become miſcible with water, into a milky liquor, by the mediation of the yolk or white of an egg, and more elegantly by mucilages. Diſtilled with water, they yield a notable quantity of a ſubtile penetrating eſſential oil † vulgarly called ſpirit; a yellow ‡ or blackiſh reſin remaining in the ſtill: this is the common roſin of the ſhops. It is ſuppoſed that the officinal Burgundy pitch ||, which is brought from Saxony, is a preparation of the ſame kind, only leſs diveſted of the oil, made by boiling the common turpentine till it acquires a due conſiſtence. The eſſential oil, rediſtilled by itſelf in a retort, with a very gentle heat, becomes more ſubtile, and in this ſtate is called ethereal §; a thick matter remaining behind, called balſam of turpentine ¶. A like balſam is obtained alſo by diſtilling, with a ſtronger fire, the common reſin; from which there ariſes, firſt a thin yellow oil, and afterwards the thicker dark-reddiſh balſam, a blackiſh reſin † remaining in the retort.

† Ol. terebinth. *Phar. Lond. & Ed.*
‡ Reſina flava *Ph. Lond.* alba *Ph. Ed.*
|| Pix Burgundica *Ph. Lond & Ed.*
§ Ol. terebinth. æthereum *P. L.*
¶ Balſ. terebinth. *P. L.*
† Reſina nigra ſeu colophonia *P. L.*

All the turpentines are hot ſtimulating corroborants and detergents. They are given, where inflammatory ſymptoms do not forbid their uſe, from half a ſcruple to half a dram and upwards, for cleanſing the urinary paſſages and internal ulcerations in general, and in laxities of the ſeminal and uterine veſſels. They ſeem to act in a peculiar manner on the urinary organs, impregnating the water with a violet ſmell, even when applied externally, particularly the Venice ſort. This laſt is accounted the moſt powerful as a diuretic and detergent, and the Chio and Straſburgh as corroborants: they all looſen the belly, the Venice moſt; and on this account they are ſuppoſed by Riverius and others to be leſs hurtful than ſuch irritating diuretics, as are not accompanied with that advantage. Terebinthinate glyſters, in obſtinate coſtiveneſs, are ſaid to be much preferable to ſaline, as being more certain and durable *(a)*. The common turpentine, as being the moſt offenſive, is rarely given internally: its principal uſe is in ſome external applications, among the farriers, and for the diſtillation of the oil.

The oil is a moſt potent ſtimulating detergent diuretic. It is ſometimes given, in doſes of a few drops, in rheumatiſms and fixt pains of the joints; and ſome have ventured on much larger quantities. Cheyne recommends, as a perfect cure for ſciaticas, though of many years ſtanding, from one to four drams of the ethereal oil, to be taken with thrice its quantity of honey, in a morning faſting, with large draughts of ſack whey after it, and an opiate at bed-time: this medicine is to be repeated, with the intermiſſion of a day now and then, if daily repetitions cannot be borne, for four or five days, or eight at furtheſt *(b)*. It appears, however, highly imprudent, to venture on ſuch large doſes at once of a medicine ſo very hot and ſtimulating. Boerhaave, after recounting, not without ſome exaggeration, its ſtyptic, anodyne, healing, antiſeptic, and diſcutient virtues when applied hot externally, and its aperient, warming, ſudorific and diuretic qualities when taken internally, adds, that it muſt be uſed with great caution; that when taken too freely, it affects the head, excites heat and pain therein, and, violently urging a diabetes, brings on a flux of the ſemen and of the liquor of the proſtates; and that in venereal runnings, in which it has by ſome been commended, it tends to inflame the parts and increaſe the diſorder.

The balſam and the inſpiſſated reſins are uſed chiefly externally: the balſam is leſs pungent than the oil, and the reſins much leſs ſo than the turpentines in ſubſtance. The common yellow reſin, in taſte conſiderably bitter, is ſometimes given as an internal corroborant, in preference to the turpentines themſelves, as being diveſted of the ſtimulating oil.

TERRA JAPONICA.

TERRA JAPONICA Ph. Lond. Terra japonica dicta Ph. Ed. JAPAN EARTH, improperly ſo called. * The plant which yields the terra japonica, grows in the Eaſt Indies, and is called *coira*, or *caira*, by the natives of Bahar province. It appears to be the ſame with that mentioned by Cleyerus and Herbert de Jagur, from which the natives of Pegu prepare this extract: they name the tree *Kheir* or *Khadira.*

(a) Cullen, *Mat. Med.*

(b) *Eſſay on the gout, Edit.* x. §. LXXI. *p.* 119.

It is a ſpecies of the genus *mimoſa* of Linnæus, and called by him *mimoſa catechu.* Its ſtem grows to about a foot in thickneſs, and from three to five feet high. It branches out into a thick ſpreading top, ſeldom above twelve feet high. The bark is thick and rough. The wood is extremely hard and heavy; its interiour part varies from a pale brown to a dark red, ſometimes approaching to black, but always covered with one or two inches thick of white wood. The leaves are doubly pinnated, and have two prickles at the baſe. From the axillæ of the leaves, ariſe denſe ſpikes of ſmall flowers, ſucceeded by pods.

The *terra japonica* is an extract of the wood of this plant, prepared in the following manner. After the trees are felled, the exteriour white wood is carefully cut off, and the interiour coloured part is cut into chips, with which narrow-mouthed unglazed earthen pots are filled, and water poured upon them till it appears among the upper chips. When this is half evaporated by boiling, the decoction, without ſtraining, is poured into a flat earthen pot, and boiled to one third part; this is ſet in a cool place for one day, and afterwards evaporated by the heat of the ſun, ſtirring it ſeveral times in the day; when it is reduced to a conſiderable thickneſs, it is ſpread upon a mat or cloth which has previouſly been covered with the aſhes of cow-dung; this maſs is divided into ſquare or quadrangular pieces by a ſtring, and completely dried by turning them frequently in the ſun.

This extract is called by the natives *cutt*; by the Engliſh *cutch.* In making it, the pale brown wood is preferred, as it produces the fine whitiſh extract. The darker the wood is, the blacker the extract, and of leſs value. From the ſlovenly manner in which the preparation is made, it generally contains a conſiderable quantity of earth, beſides what may be deſignedly put in it for the purpoſe of adulteration *(a)*.

THIS concrete is a mild aſtringent, more agreeable in taſte than moſt of the other ſubſtances of that claſs, being accompanied with a conſiderable degree of ſweetneſs. It is often ſuffered to diſſolve leiſurely in the mouth; both as a topical reſtringent for laxities and exulcerations of the

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(a) From Mr. Kerr's account, in Vol. V. of the *London Medical Obſervations.*

the gums ; and in alvine and uterine fluxes, and catarrhal coughs and hoarſeneſs ; medicines of this kind acting in general to much better advantage when thus gradually ſwallowed, than when taken in full doſes at once. With this view the terra japonica is made in the ſhops into troches ; beaten with equal its weight of gum-arabic, and four times the weight of both of ſugar of roſes, and ſo much water to be dropt in as will reduce them into a maſs of a due conſiſtence for being formed. The Edinburgh college directs a compound electuary, of which terra japonica is the baſis, joined with other aſtringents and aromatics, and a ſmall proportion of opium, which is a very elegant and efficacious medicine of the kind.

Trochiſci e terra japon. *Pharm. Lond.*

Electuar. japonic. *vulgo* confect. japon. *Ph. Ed.*

Japan-earth diſſolves almoſt totally in water, excepting the impurities ; which are uſually of the ſandy kind, and in conſiderable quantity, amounting, in the ſpecimens I examined, to about one eighth of the maſs. Of the pure matter, rectified ſpirit diſſolves about ſeven eighths, into a deep red liquor : the part, which it leaves undiſſolved, is an almoſt inſipid mucilaginous ſubſtance. In the ſhops a ſolution of it is made in proof ſpirit, with the addition of cinnamon, a ſpice the beſt adapted of any to the intention of this medicine : three ounces of the japan-earth and two of cinnamon are digeſted in a quart † or two pounds and a half ‡ of the ſpirit, and the ſtrained tincture given commonly in doſes of two or three tea-ſpoonfuls. It diſſolves alſo in volatile alkaline ſpirits, in alkaline lye, in the mineral acids, partially and more difficultly in the vegetable acids, and not at all in oils : all the ſolutions are of a red or purpliſh colour.

Tinctura japonica
† *Ph. Lond.*
‡ *Ph. Edinb.*

* By the natives where this extract is made, it is employed medicinally as a cooler in the diſeaſes conſidered by them as of a hot nature. It is ſaid, when profuſely uſed, to deſtroy the venereal appetite. It is given at the rate of two ounces a day to tame vicious horſes. It is a principal ingredient in one of their ointments of great repute, compoſed of blue vitriol four drams, Japan-earth four ounces, alum nine drams, white reſin four ounces ; theſe are reduced to a fine powder, and mixed by the hand with ten ounces of oil-olive, and water enough to give the maſs a proper conſiſtence. This ointment is uſed in every ſore, from a freſh wound to a venereal ulcer ; and has been found remarkably ſerviceable by European practitioners *(a)*.

(a) Kerr's Account, above quoted.

TERREA ABSORBENTIA.

ABSORBENT EARTHS: diſtinguiſhable from other earthy and ſtony ſubſtances by their ſolubility in acids. Such are, the mineral calcareous earths, as chalk: the animal calcareous earths, as crabs-claws, oyſter-ſhells, egg-ſhells, pearl, coral, coralline: animal earths not calcareous, as crabs-eyes and burnt hartſhorn. See the reſpective ſubſtances; which have been ſeparately treated of, ſo far as concerned each in particular; and whoſe general and common qualities were reſerved for this article.

The obvious and immediate virtue of theſe bodies is, to obtund acid humours in the firſt paſſages, and thus to relieve the cardialgic and other complaints occaſioned by them: the relief, however, which they afford, is oftentimes only temporary; from their acting only upon the acid already generated, without correcting the indiſpoſition which tends to produce more. If no acid humours are contained in the firſt paſſages, theſe earthy bodies, not ſoluble by any other kind of fluid, can have no ſalutary operation; and, by concreting with the viſcous contents of the ſtomach into indigeſtible maſſes, may prove injurious in a high degree*(a)*.

Abſorbents are of more general uſe in infancy than in adult age; acidities being very familiar to young children, being often in that tender age productive of alarming ſymptoms, and having a greater or leſs ſhare in moſt of their diſeaſes; whereas, in adults, they are much leſs frequent, accompanying chiefly hypochondriacal affections, cardialgiæ, and ſuch diſorders as happen in the firſt paſſages from the immoderate uſe of acid and fermentable food.

An hypotheſis formerly obtained, which aſcribed the acute diſeaſes of adults to a morbific acid: againſt which the abſorbent earths were introduced as the moſt direct alexipharmacs. This theory is now juſtly exploded; theſe diſeaſes, inſtead of being produced, being in general moſt ſucceſsfully controlled, by acids. The uſe of abſorbents, in different kinds of fevers, is nevertheleſs ſtill continued, and ſometimes perhaps with advantage: for, though the earths of themſelves are apparently

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(a) Vide Tralles *Virium terreis remediis aſcriptorum examen rigoroſius.*

parently rather injurious than beneficial, yet as acids are often given freely at the ſame time, the ſolution of the earth in the acid may prove a medicine more ſerviceable in particular caſes than the acid unobtunded. It is however, doubtleſs, more adviſeable, to uſe the earth previouſly diſſolved in the acid, than to give them ſeparately.

The college of Berlin, ſenſible of the advantage of having the earths, in theſe caſes, previouſly diſſolved, or reduced to a ſoluble ſaline form; as well as of the abſurdity, retained in other German pharmacopœias, of precipitating them from their ſolutions by fixt alkaline ſalts, and thus rendering them wholly inert; directs them to be digeſted in diſtilled vinegar, with a gentle heat, till the menſtruum ceaſes to act, and the filtered ſolution to be inſpiſſated to dryneſs. This preparation is greatly preferable to the ſimple imbibition with vinegar or lemon juice recommended by ſome; as by this laſt management the earth is made ſoluble only in part, and in an undeterminable proportion.

Magiſterium ſolubile, coralliorum, perlarum, &c. *P. Brandenb.*

Solutions of theſe earths in vegetable acids are in taſte ſomewhat auſtere. The different earths differ ſomewhat from one another, both in the degree and in the ſpecies of the taſte, and probably alſo in the medical effects, of the ſolutions: but whether theſe differences are ſuch, that ſome of them, as crabs-claws, pearl, coral, and bezoar, are moſt diſpoſed to promote a diaphoreſis in fevers, while others, as egg-ſhells and oyſter-ſhells, act rather by promoting urine, as ſeems to be generally ſuppoſed, has not been determined by fair experience, the earths having rarely been given in a diſſolved or in a ſoluble ſtate. It is moſt probable that they all act, when diſſolved, as mild cooling reſtringents; for when given in ſubſtance, as abſorbents, in caſes of acidities, they all tend to reſtrain fluxes of the belly, or to bring on coſtiveneſs, an effect to which regard ought to be had in the uſe of them.

There are two ſoluble earths, not commonly ranked among the abſorbents, whoſe effects, when combined with acids, are known with more certainty, as they have been uſed oftener, ſo combined, than otherwiſe; to wit, the aluminous earth and magneſia; of which the one is ſtrongly ſtyptic, and the other moderately purgative.

Combinations of the abſorbent earths with the nitrous and marine acids are bitteriſh and of great pungency, particularly thoſe with the marine: the medical effects of theſe ſolutions are little known. The vitriolic acid does not diſſolve them into a liquid form, but precipitates them from all the others, and is thus combined with them into concretes nearly inſipid.

Experiments have been made for determining the comparative ſtrength of different abſorbents, or the quantities of acid they are capable of ſatiating. Langius reports, that ten grains of crabs-claws deſtroyed the acidity of forty drops of ſpirit of ſalt; that egg-ſhells, crabs-eyes, and mother of pearl, taken in the ſame quantity, ſaturated fifty drops each; red coral, white coral, and fixt alkaline ſalt, ſixty drops each; volatile alkaline ſalt and pearl, eighty drops each; chalk, an hundred drops; oyſter-ſhells, an hundred and twenty; and ſome lime ſtones no leſs than an hundred and ſixty *(a)*. Theſe experiments however (admitting their accuracy, and the acid to have been equally neutralized in all, which may be reaſonably queſtioned) do not anſwer the end ſo perfectly as could be wiſhed; for, to different acids, the earths have different habitudes: from a ſet of experiments made by Homberg, it appears that oyſter-ſhells, for example, require for their ſolution more of the marine acid than coral does; whereas of the nitrous acid, contrariwiſe, the coral requires more than the oyſter-ſhells *(b)*. Neither the nitrous nor the marine acids are thoſe which abſorbents are deſtined to ſatiate in the human ſtomach, and by which their ſtrength ſhould be examined: the acids of the vegetable kingdom, and the acid of milk, may be preſumed to be the moſt analogous to ſuch as are generated in the bodies of animals. On trying, with theſe, the ſeveral ſubſtances enumerated at the beginning of this article, the differences in their abſorbent powers appeared not to be very great: they all ſaturated pretty nearly the ſame quantities of the acids; and there remained, from all, quantities very conſiderable, but not very greatly different, of a matter which further additions of the acid would not diſſolve.

THEA.

THEA Pharm. Edinb.(c) TEA: the leaf of a Chineſe ſhrub, *evonymo affinis arbor orientalis nucifera flore roſeo Pluk. alm. Thea bohea & viridis Linn.* The leaves, carefully picked, are dried haſtily on warm iron plates; whereby they are ſaid to loſe in great meaſure ſome noxious qualities which they have when freſh, and to preſerve their admired flavour which by ſlow exſiccation would be loſt. The ſeveral ſorts of tea brought to us are ſuppoſed to be the leaves of the ſame plant, collected at different times, and cured in a ſomewhat different manner: Neumann ſuſpects that the brown colour, and the flavour, of the bohea ſorts, are introduced by art.

(a) *Vide* Langii *Opera omnia medica, Lipſiæ* 1704, *p.* 452 *& ſeq.*

(b) *Vide Memoires de l'acad. roy. des ſciences de Paris, pour l'ann.* 1700.

(c) Expunged.

Both the green and bohea teas have an agreeable ſmell, and a lightly bitteriſh ſubaſtringent taſte: with ſolution of chalybeate vitriol, they ſtrike an inky blackneſs. They give out their ſmell and taſte both to watery and to ſpirituous menſtrua: to water, the green ſorts communicate their own green tincture, and the bohea their brown: to rectified ſpirit they both impart a fine deep green. On gently drawing off the menſtrua from the filtered tinctures, the water is found to elevate nearly all the peculiar flavour of the tea, while rectified ſpirit brings over little or nothing, leaving the ſmell as well as the taſte concentrated in the extract: both extracts are very conſiderably aſtringent, and not a little ungrateful; the ſpirituous moſt ſo.

Infuſions of tea, as dietetic articles, have been extravagantly commended by ſome and condemned by others; and notwithſtanding the frequency of their uſe, their real effects are ſcarcely as yet clear. They ſeem, when moderately uſed, to be for the moſt part innocent: in ſome caſes, they ſeem to be ſalutary: in ſome, they are apparently prejudicial. They dilute thick juices and quench thirſt more effectually, and paſs off by the natural emunctories more freely, than mere watery fluids: they refreſh the ſpirits in heavineſs and ſleepineſs, and ſeem to counteract the operation of inebriating liquors. From their manifeſt aſtringency, they have been ſuppoſed to ſtrengthen and brace up the ſolids, but this effect experience does not countenance: it is in diſorders, and in conſtitutions, wherein corroborants are moſt ſerviceable, that the immoderate uſe of tea is peculiarly hurtful; in cold indolent habits, cachexies, chloroſes, dropſies, and debilities of the nervous ſyſtem.

THLASPI.

THLASPI Ph. Lond. a plant with oblong narrow undivided leaves joined immediately to the ſtalks, on the tops of which grow numerous tetrapetalous flowers, each of which is followed by a ſhort flat ſeed-veſſel divided tranſverſely into two cells.

1. *Thlaſpi arvenſe ſiliquis latis C. B.* *Thlaſpi arvenſe Linn.* Treacle-muſtard: with roundiſh-pointed jagged leaves, and broad capſules containing about four ſeeds in each cell. It is annual, and grows wild in corn-fields.

2. *Thlaſpi arvenſe, vaccariæ incano folio majus C. B.* *Thlaſpi campeſtre Linn.* Mithridate muſtard: with hoary ſharp-pointed leaves ſhaped like an arrow-head; and only one ſeed in each cell. It is biennial, and grows in fields and open clayie grounds.

The ſeeds of theſe plants have an acrid biting taſte, approaching to that of the common muſtard; with which they agree nearly in their pharmaceutic properties, their pungent matter being totally extracted by water, only partially by rectified ſpirit, and being elevated by water in diſtillation. They have, joined to their acrimony, an unpleaſant flavour, ſomewhat of the garlick or onion kind; and this they give out to ſpirituous as well as watery menſtrua. They are rarely made uſe of any otherwiſe than as ingredients in the compoſitions whoſe names they bear: though ſome recommend them in different diſorders, preferably to the common muſtard.

THUS.

THUS Ph. Lond. Frankincenſe: a ſolid brittle reſin, brought to us in little glebes or maſſes, of a browniſh or yellowiſh colour on the outſide, internally whitiſh or variegated with whitiſh ſpecks. It is ſuppoſed to be the produce of the pine that yields the common turpentine, and to concrete upon the ſurface of the terebinthinate juice ſoon after it has iſſued from the tree.

This reſin has a bitteriſh acrid unpleaſant taſte, and no conſiderable ſmell: it diſſolves totally in rectified ſpirit, but is ſcarcely acted upon by watery menſtrua. It may be looked upon as a mild corroborant; though at preſent it is little otherwiſe made uſe of than as an ingredient in theriaca, and externally in plaſters.

THYMELÆA.

THYMELÆA Pharm. Pariſ. A ſhrubby plant; with ſmooth uncut leaves; and monopetalous flowers ſet thick together: each flower is cut into four acute ſections, and followed by an oblong, red, yellow, or black berry, containing one ſeed, which reſembles a hemp-ſeed.

1. Thymelæa: *Thymelæa foliis lini C. B. Daphne Gnidium Linn.* Spurge-flax: with the ſtalks and branches clothed with evergreen leaves like thoſe of flax; and white flowers in cluſters on the tops.

2. Laureola *ſeu Chamælæa: Laureola ſempervirens flore viridi, quibuſdam laureola mas C. B. Daphne laureola Linn.* Spurge laurel: with evergreen ſhining bay-like leaves, ſtanding ſeveral together, only at the tops of the branches; and greeniſh flowers on pedicles in their boſoms.

3. Mezereum: *Mezereon Pharm. Edinb. Laureola folio deciduo, flore purpureo, officinis laureola femina C. B. Daphne Mezereum Linn.* Spurge-olive, widow-wail: with pale purpliſh or white flowers clothing the branches; on the tops of which appear, after the flowers have fallen, bay-ſhaped leaves not ſhining.

The firſt of theſe plants grows on mountainous places in the ſouthern parts of Europe: the ſecond in moiſt woods in ſome parts of England: the third, a native of Germany*(a)*, is cultivated in our gardens, on account of the elegance and earlineſs of its flowers, which ſometimes appear in the end of January: the berries of all the ſorts ripen in Auguſt or September.

The leaves of theſe plants have little or no ſmell, but a nauſeous, acrid, very durable taſte: taken internally, in ſmall doſes, as ten or twelve grains, they are ſaid to operate with violence, by ſtool, and ſometimes by vomit, ſo as not to be ventured on with ſafety unleſs their virulence be previouſly abated by long boiling, and even then they are much too precarious to be truſted to.

(a) The mezereon has of late been obſerved to be a native of England alſo, being found plentifully in ſome woods near Andover in Hampſhire.

The flowers are of a different nature, being in taſte little other than mucilaginous and ſweetiſh, and of a light pleaſant ſmell.

The pulpy part of the berries appears alſo to be harmleſs; but the ſeeds, called *coccognidia* or *grana cnidia*, are as acrid, and as virulently purgative as the leaves.

* The bark of the ſpurge laurel, macerated in water, has of late been much employed in France as a topical application to the ſkin, for the purpoſe of excoriating and exciting a diſcharge. That of the mezereon has been recommended for the ſame purpoſe.

The root of the mezereon has lately been uſed with ſucceſs in caſes of venereal nodes. Dr. Ruſſel, to whom the public is obliged for the communication of its efficacy in this frequently obſtinate complaint, obſerves, in the medical inquiries above mentioned, that the cortical part of the root, on firſt chewing, is not pungent, but after a little time proves greatly ſo; and that the diſagreeable ſtimulus in the fauces laſts for many hours: that a decoction of an ounce of the freſh cortical part in a gallon and a half of water (the boiling being continued till half a gallon is waſted, and an ounce of ſliced liquorice added towards the end) may be taken to the quantity of half a pint four times a day, is not nauſeous to the taſte, and has not been found to diſagree with any ſtomach or conſtitution, or to remarkably increaſe any of the ſecretions; but that on doubling the quantity of the mezereon, the decoction proved ſo pungent, that no ſtomach could bear it. He recommends the above decoction principally in thoſe venereal nodes that proceed from a thickening of the membrane of the bones, which appears to be the cauſe of greateſt part of theſe tumours, at leaſt when recent: when there is an exoſtoſis, nothing is to be hoped for from this medicine; and when the bone is carious, no cure is to be expected without an exfoliation, though even here it ſometimes diſperſes the tumour, as appears from ſome of the caſes which he relates. In a thickening of the perioſteum from other cauſes, it has likewiſe had good effects.

THYMIAMA.

THYMIAMATIS cortex Officinarum Germaniæ: Thus judæorum Quorundam. A bark, in ſmall browniſh-grey pieces, intermixed with bits of leaves, ſeeming as if the bark and leaves had been bruiſed and preſſed together; brought from Syria, Cilicia, *&c.* and ſuppoſed to be the produce of the liquid-ſtorax tree.

This bark has an agreeable balſamic ſmell, approaching to that of liquid-ſtorax, and a ſubacrid bitteriſh taſte accompanied with ſome ſlight aſtringency. Infuſions of it in water are of an orange colour, in taſte and ſmell ungratefully balſamic: inſpiſſated, they leave a dark reddiſh brown extract, retaining ſome of the ſmell of the bark, in taſte auſtere, ſlightly bitter, and of a mild aromatic acrimony. To rectified ſpirit it communicates a dark colour like that of a ſolution of balſam of Peru: the ſpirit, diſtilled off from this tincture, is highly fragrant, inſomuch that a dram communicates an agreeable odour to ſome quarts of water: the remaining extract is likewiſe of a pleaſant ſmell, and amounts to at leaſt one eighth of the weight of the bark.

This bark, ſaid to be common in the German ſhops, is in this country very rarely to be met with. Cartheuſer and Hoffman, from whom the above account is extracted, report, that it affords an excellent fumigation for œdemas, rheumatiſms, and catarrhs; and that the ſpirituous tincture and extract, and the diſtilled ſpirit, are uſeful anodynes or antiſpaſmodics in convulſive coughs and other diſorders.

THYMUS.

THYME: a low ſhrubby plant; conſiſting of numerous ſlender tough ſtalks, with little roundiſh leaves in pairs, and looſe ſpikes, on the tops, of purpliſh or whitiſh labiated flowers, whoſe upper lip is nipt at the extremity, the lower divided into three nearly equal ſegments.

1. Thymus *Pharm. Edinb.* *Thymum vulgare folio tenuiore C. B.* *Thymus vulgaris Linn.* Common thyme: with upright ſtalks, and dark browniſh green ſomewhat pointed leaves; a native of the ſouthern parts of Europe, common in our gardens, and flowering in June and July.

This herb is a moderately warm pungent aromatic. To water it imparts, by infuſion, its agreeable ſmell, but only a weak taſte, with a yellowiſh or brown colour: in diſtillation, it gives over an eſſential oil, in quantity about an ounce from thirty pounds of the herb in flower, of a gold yellow colour if diſtilled by a gentle fire, of a deep browniſh red if by a ſtrong one, of a penetrating ſmell reſembling that of the thyme itſelf, but leſs grateful, in taſte exceſſively hot and fiery: the remaining decoction, inſpiſſated, leaves a bitteriſh, roughiſh, ſubſaline extract. The active matter, which by water is only partially diſſolved, is by rectified ſpirit diſſolved completely; though the tincture, in colour blackiſh-green, diſcovers leſs of the ſmell of the thyme than the watery infuſion: the ſpirit brings over in diſtillation a part of its flavour, leaving an extract of a weak ſmell and of a penetrating camphorated pungency.

2. SERPYLLUM *Ph. Ed.* *Serpyllum vulgare minus C. B.* *Thymus Serpyllum Linn.* Mother-of-thyme: with trailing ſtalks, and obtuſe leaves; growing wild on heaths and dry paſture grounds. This alſo is an elegant aromatic plant, ſimilar to the foregoing ſpecies, but milder, and in flavour rather more grateful. Its eſſential oil is both in ſmaller quantity and leſs acrid, and its ſpirituous extract comes greatly ſhort of the penetrating warmth and pungency of that of the other. It is ſaid to afford an agreeable diſtilled water, more durable, but leſs active and penetrating than pepper-mint *(a)*. Both the leaves themſelves, and their ſpirituous tincture, are of a bright green colour, without any thing of the brown or blackiſh hue of thoſe of common thyme.

3. THYMUS CITRATUS *Ph. Lond.* *Serpyllum foliis citri odore C. B.* Lemon-thyme: in appearance differing little from the ſecond ſort, of which Linnæus makes it a variety, except that it is more upright and more buſhy; a native of dry mountainous places, common in gardens, and flowering as the others in July. This ſpecies is leſs pungent than the firſt ſort, more ſo than the ſecond, and much more grateful than either: its ſmell in particular is remarkably different, approaching to that of lemons. Diſtilled with water, it yields a larger quantity than the other ſorts, of a yellowiſh very fragrant oil of the lemon flavour, containing nearly all the medicinal parts of the plant, for the remaining decoction is almoſt inſipid as well as inodorous. It gives over alſo with rectified ſpirit its finer odorous matter; a leſs agreeable flavour, and a moderate warmth, remaining in the ſpirituous extract.

(a) Cullen, *Mat. Med.*

TILIA.

TILIA Pharm. Lond. *Tilia femina folio majore C. B.* *Tilia europæa Linn.* Lime or Linden: a tall ſpreading-branched tree, with large heart-ſhaped, ſerrated, ſoft, ſomewhat hairy leaves: in the boſoms of theſe riſe long narrow leafy productions, from the middle rib of which iſſue one or three pedicles bearing three flowers apiece, or one pedicle bearing nine: the flower is whitiſh, pentapetalous, and followed by a kind of dry berry about the ſize of a filberd. It is a native of England, flowers in July, and begins to loſe its leaves in Auguſt.

The flowers of the lime-tree are ſuppoſed to have an anodyne and antiſpaſmodic virtue: Hoffman ſeems to entertain a great opinion of them in theſe intentions, and as his theory deduces moſt diſeaſes from ſpaſms and ſpaſmodic ſtrictures, they are accordingly very frequent in his preſcriptions: he ſays he knew a chronical epilepſy cured by the uſe of an infuſion of them drank as tea. The freſh flowers have a moderately ſtrong ſmell, in which their virtue (whatever it may be) ſeems to conſiſt, and which in keeping is ſoon diſſipated: when diveſted of this odorous principle, they diſcover to the taſte only a ſtrong mucilage, from which may be extracted, by rectified ſpirit, a ſlightly bitteriſh ſubaſtringent matter.

TITHYMALUS.

SPURGE: a plant with ſmall ſmooth leaves, round ſtalks full of a milky juice, and umbel-like cluſters of tetrapetalous flowers, whoſe cups are divided into four ſegments ſet alternately with the petala: the flower is followed by a roundiſh or three-ſquare capſule containing three ſeeds.

1. Tithymalus paralios: *Tithymalus maritimus C. B.* *Euphorbia Paralias Linn.* Sea ſpurge: with oblong narrow flax-like leaves, broadeſt in the middle, clothing the ſtalks, and lying over one another in an upward direction, like ſcales; and two roundiſh, heart-ſhaped, or kidney-ſhaped leaves encompaſſing each of the ſubdiviſions of the umbel: found wild on ſandy ſhores, and flowering in June. All the parts of

this plant are extremely acrid irritating cathartics; apt to inflame the mouth, fauces, and ſtomach; operating with ſo great violence, that though ſome may perhaps have borne their operation without much injury to the conſtitution, yet common prudence forbids their being ever ventured on. Several correctors have been employed for them, but none with commendable ſucceſs: maceration of the middle bark of the root in vinegar, directed by the faculty of Paris, renders it indeed leſs virulent, but of precarious operation: digeſtion of the milky juice with alkaline ſalts, recommended by others, leaves it ſtill too acrid. For alleviating inflammatory ſymptoms produced by imprudently ſwallowing or taſting theſe acrid ſubſtances, milk, plentifully drank, ſeems the moſt effectual remedy. Gerard relates, that on taking but one drop of the milk of the ſea ſpurge, it did ſo ſwell and inflame in his throat, that he hardly eſcaped with his life, and that on drinking milk, the extremity of the heat ceaſed.

2. TITHYMALUS CYPARISSIUS *C. B.* *Euphorbia Cypariſſias Linn.* Cypreſs ſpurge: with numerous oblong ſlender leaves, not wider in the middle than at the ends; the umbel divided into numerous ramifications, each of which is divided and ſubdivided into two; the diviſions perforating as it were the two roundiſh leaves which encompaſs them; a native of Germany, Switzerland, and ſome other parts of Europe. This ſpecies, though allowed by the faculty of Paris to be uſed indiſcriminately with the preceding, is in all its parts leſs acrimonious. Poterius ſays he has found half a dram or a dram of the powdered root to act as a mild cathartic; and that the juice obtained from the bruiſed herb and root, depurated and exſiccated in the ſun, is of the ſame operation with ſcammony(a).

SEVERAL other ſpurges are enumerated in catalogues of the materia medica, under the names of *eſula*, *pityuſa*, *cataputia*, *lathyrus*, *alypum*, *peplus*, *apios*, &c. among which there does not appear to be any one more virulent than the firſt above deſcribed, or leſs virulent than the ſecond. None of them are among us ventured on for any internal uſe: the milky juice of the wild ſpurges is ſometimes applied externally by the common people for conſuming warts.

(a) *Pharmacopœia ſpagyrica, lib.* iii. *ſect.* 3.

TORMENTILLA.

TORMENTILLA Pharm. Lond. & Edinb. Tormentilla ſilveſtris C. B. Heptaphyllum. Tormentilla erecta Linn. TORMENTIL or SEPTFOIL: a plant with ſlender, weak, upright ſtalks; oblong leaves, indented towards the extremity, and converging from the indented part to their juncture with the ſtalk, ſtanding generally ſeven at a joint; and ſmall yellow tetrapetalous flowers on the tops of the branches, followed by naked ſeeds: the root is generally crooked and knotty, of a dark brown or blackiſh colour on the outſide, and reddiſh within. It is perennial, grows wild in woods and on commons, and flowers in June.

TORMENTIL root is a ſtrong and almoſt flavourleſs aſtringent, and gives out its aſtringency both to water and rectified ſpirit, moſt perfectly to the latter: the watery decoction, of a tranſparent browniſh red colour whilſt hot, becomes turbid in cooling like that of the Peruvian bark, and depoſites a portion of reſinous matter: the ſpirituous tincture, of a brighter reddiſh colour, retains its pellucidity. The extracts, obtained by inſpiſſation, are intenſely ſtyptic, the ſpirituous moſt ſo. It is generally given in decoction: an ounce and a half of the powdered root may be boiled in three pints of water to a quart, adding, towards the end of the boiling, a dram of cinnamon: of the ſtrained liquor, ſweetened with an ounce of any agreeable ſyrup, two ounces or more may be taken four or five times a day.

TRICHOMANES.

TRICHOMANES Pharm. Lond. Polytrichum ſive Trichomanes Pharm. Edinb. & C. B. Callitrichum. Aſplenium Trichomanes Linn. ENGLISH MAIDENHAIR: a ſmall plant, without ſtalks: the leaves are long, narrow, compoſed of little roundiſh dark-green ſegments ſet in pairs along a ſhining black rib: the ſeeds are a fine duſt lying on the backs of the leaves. It is perennial, and grows wild on ſhady grounds and old walls.

THIS herb has a mucilaginous ſomewhat ſweetiſh and roughiſh taſte, and little or no particular flavour. It is accounted ſerviceable in diſorders of the breaſt, particularly in tickling coughs and hoarſeneſs from thin acrid defluxions, and in theſe intentions has been long ſubſtituted among us to the *adianthum*, from which it appears to be very little, if at all, different in quality. It is uſually directed in infuſion or decoction, with the addition of a little liquorice: a pectoral ſyrup is prepared in the ſhops, from an infuſion of five ounces of the dry leaves and four of liquorice root in five pints of boiling water.

Syrup. pectoralis *P. L.*

TRIFOLIUM PALUDOSUM.

TRIFOLIUM PALUDOSUM Ph. Lond. Menyanthes Ph. Ed. Trifolium paluſtre C. B. Menyanthes trifoliata Linn. BUCKBEAN: a plant with large oval leaves, pointed at each end like thoſe of the garden bean, ſet three together on long pedicles, which embrace the ſtalk to ſome height, and there parting leave it naked to near the top, where iſſues a ſhort ſpike of pretty large reddiſh white monopetalous flowers, each of which is cut into five ſegments, hairy on the inſide, and followed by an oval ſeed-veſſel. It is perennial, grows wild in marſhy places, and flowers in May.

THE leaves of buckbean have a bitter penetrating taſte, which they impart both to watery and ſpirituous menſtrua; without any remarkable ſmell or flavour. They have of late years come into common uſe, as an alterative and aperient, in impurities of the humours, and ſome hydropic and rheumatic caſes. They are uſually taken in the form of infuſion, with the addition of ſome of the acrid antiſcorbutic herbs, which in moſt caſes improve their virtue, and of orange-peel or ſome other grateful aromatic to alleviate their ill taſte: they are ſometimes, among the common people, fermented with malt liquors, for an antiſcorbutic diet-drink. Their ſenſible operation is by promoting urine and ſomewhat looſening the belly.

TURPETHUM.

TURPETHUM ſive Turbith Ph. Ed.(a) TURBITH: the cortical part of the root of a ſpecies of convolvulus (*Convolvulus Turpethum*

(a) Expunged.

Linn.), brought from the Eaſt Indies, in oblong pieces, of a brown or aſh colour on the outſide and whitiſh within: the beſt is ponderous, not wrinkled, eaſy to break, and diſcovers to the eye a large quantity of reſinous matter.

This root, on the organs of taſte, makes at firſt an impreſſion of ſweetneſs; but when chewed for ſome time, betrays a nauſeous acrimony. It is accounted a moderately ſtrong cathartic, but does not appear to be of the ſafeſt or moſt certain kind; the reſinous matter, in which its virtue reſides, being very unequally diſtributed; inſomuch that, as is ſaid, ſome pieces, taken from a ſcruple to a dram, purge violently, whilſt others, in larger doſes, have very little effect.

TUSSILAGO.

TUSSILAGO ſive Farfara Pharm. Edinb. Tuſſilago vulgaris C. B. Bechium & ungula caballina quibuſdam. Tuſſilago Farfara Linn. Coltsfoot: a low plant, producing early in the ſpring ſingle ſtalks, each of which bears a yellow floſculous flower followed by ſeveral ſeeds winged with down: the leaves, which ſucceed the flowers, are ſhort, broad, ſomewhat angular, ſlightly indented, green above, and hoary underneath. It is perennial, and grows wild in moiſt grounds.

The leaves and flowers of coltsfoot, in taſte ſomewhat mucilaginous, bitteriſh, and roughiſh, and of no remarkable ſmell, are ranked among the principal pectoral herbs. Infuſions of them, with a little liquorice or with the other herbs of ſimilar intention, are drank as tea, and ſometimes with conſiderable benefit, in catarrhous diſorders and coughs threatening conſumptions. They have been found ſerviceable in hectics and colliquative diarrhœas(a).

TUTIA.

TUTIA Pharm. Lond. & Edinb. Tutia alexandrina. Tutty: an argillaceous ore of zinc, found in Perſia; formed on cylindrical moulds into tubulous pieces like the bark of a tree, and baked to a moderate hardneſs;

(a) Percival, *Eſſ. Med. and Exp.* II. 224.

hardneſs *(a)*; generally of a browniſh colour and full of ſmall protuberances on the outſide, ſmooth and yellowiſh within, ſometimes whitiſh, and ſometimes with a blueiſh caſt. Like other argillaceous bodies, it becomes harder in a ſtrong fire; and after the zinc has been revived and diſſipated by inflammable additions, or extracted by acids, the remaining earthy matter affords, with oil of vitriol, an aluminous ſalt (ſee *Bolus* and *Calaminaris)*.

TUTTY, levigated into an impalpable powder, is, like the lapis calaminaris and calces of zinc, an uſeful ophthalmic, and frequently uſed as ſuch in ointments and collyria. Ointments for this intention are prepared in the ſhops, by mixing the levigated tutty with ſo much vipers fat as is ſufficient to reduce it to a due conſiſtence †; or by adding one part to five parts of a ſimple liniment made of oil and wax ‡.

Tutia præparata *Phar. Lon. & Edin.*

Ung. tutiæ
† *Ph. Lond.*
‡ *Ph. Edinb.*

VALERIANA.

VALERIANA ſilveſtris Ph. Lond. & Edinb. Valeriana ſilveſtris major montana C. B. Valeriana officinalis Linn. WILD VALERIAN: a plant with channelled ſtalks; the leaves in pairs; each leaf compoſed of a number of long narrow ſharp-pointed ſegments, indented about the edges, of a dull green colour, ſet along a middle rib, which is terminated by an odd one; producing, on the tops of the ſtalks, umbel-like cluſters of ſmall monopetalous flowers, each of which is divided into five ſegments, ſet in a very little cup, and followed by a ſingle naked ſeed winged with down: the root conſiſts of tough ſtrings with numerous ſmaller threads, matted together, iſſuing from one head, of a duſky browniſh colour approaching to olive. It is perennial, and grows wild in dry mountainous places.

Another ſpecies, or variety, of wild valerian, is met with in moiſt watery grounds, diſtinguiſhable by the leaves being broader and of a deep

gloſſy

(a) The above account of the origin of tutty is ſupported by the authority of Teixeira and Douglas, and by its chemical properties. That the common opinion, of its being a ſublimate produced in the European founderies where zinc is melted with other metals, is erroneous, appears from hence; that tutty is not found, upon ſtrict enquiry, to be known at thoſe founderies; and by its conſiſting in great part of an earth not capable of riſing in ſublimation. Thus much, however, is probable, that ſublimates or the common ores of zinc are often mixed with argillaceous earths and baked hard, in imitation of the genuine oriental tutty.

gloſſy green colour. Both ſorts have been uſed indiſcriminately; but the mountain ſort is by far the moſt efficacious, and is therefore expreſſly ordered for the officinal ſpecies by the London college.

The mountain valerian root has a ſtrong not agreeable ſmell, and an unpleaſant warm bitteriſh ſubacrid taſte: the ſtrength of the ſmell and taſte is the only mark to be depended on of its genuineneſs and goodneſs. It is a medicine of great eſteem in the preſent practice againſt obſtinate hemicraniæ, hyſterical, and the different kinds of nervous diſorders, and is commonly looked upon as one of the principal antiſpaſmodics. Columna reports, that he was cured by it of an inveterate epilepſy after many other medicines had been uſed in vain: on more extenſive trials it has been found, in ſome epileptic caſes, to effect a cure, in ſeveral to abate the violence or frequency of the fits, and in many to prove entirely ineffectual: oftentimes, it either purges, or operates by ſweat or by urine, or brings away worms, before it prevents a fit. The doſe of the root in powder is from a ſcruple to a dram or two, which may be repeated, if the ſtomach will bear it, two or three times a day. * A remarkable inſtance of its efficacy in a catalepſy is given by Mr. Mudge *(a)*: doſes of half an ounce of the powder were exhibited twice a day, and a leſs quantity was ſound ineffectual.

The powdered root, infuſed in water or digeſted in rectified ſpirit, impregnates both menſtrua ſtrongly with its ſmell and taſte, and tinges the former of a dark brown, the latter of a browniſh red colour. Water diſtilled from it ſmells conſiderably of the root, but no eſſential oil ſeparates, though ſeveral pounds be ſubmitted to the operation at once: the extract obtained by inſpiſſating the watery infuſion, has a pretty ſtrong taſte, diſagreeably ſweetiſh and ſomewhat bitteriſh: the ſpirituous extract is leſs diſagreeable, and more perfectly reſembles the root itſelf: the quantity of watery extract is about one fourth the weight of the root; of the ſpirituous, about one eighth. Tinctures of it are prepared in the ſhops, by digeſting four ounces of the powdered valerian in a quart of proof ſpirit†; in the ſame quantity of the volatile aromatic ſpirit‡; or of the dulcified ſpirit of ſal ammoniac||. The root in ſubſtance, however, is generally found to be more effectual than any preparation

Tinct. valer.
† ſimp. *P. L.*
‡ volat. *P. L.*
|| *Ph. Edinb.*

(a) On the *Vis Vitæ*, &c.

of it. Among the materials I have made trial of for covering its flavour, mace ſeemed to anſwer the beſt.

VANILLA.

VANILLA ſeu Banilia Pharm. Pariſ. Aracus aromaticus. VANELLOE: the fruit of a climbing plant *(volubilis ſiliquoſa mexicana foliis plantaginis Raii hiſt. Epidendrum Vanilla Linn.)* growing in the Spaniſh Weſt Indies. It is a long flattiſh pod, containing, under a wrinkled brittle ſhell, a reddiſh brown pulp, with ſmall ſhining black ſeeds.

VANELLOES have an unctuous aromatic taſte, and a fragrant ſmell like that of ſome of the finer balſams heightened with muſk. They are uſed chiefly in perfumes; ſcarcely ever, among us at leaſt, in any medical intention; though they ſhould ſeem to deſerve a place among the principal medicines of the nervous claſs. By diſtillation, they impregnate water ſtrongly with their fragrance, but give over little or nothing with pure ſpirit: by digeſtion, ſpirit totally extracts their ſmell and taſte, and in great meaſure covers or ſuppreſſes the ſmell.

VERBASCUM.

TAPSUS BARBATUS ſive Verbaſcum Pharm. Edinb. Verbaſcum mas latifolium luteum C. B. Candelaria & lanaria quibuſdam. Verbaſcum Thapſus Linn. MULLEIN: a large plant, all over white and woolly; with a ſingle woody ſtalk, clothed with oblong oval leaves joined to it without pedicles, bearing on the top a long ſpike of large yellow monopetalous flowers cut into five ſegments, and followed by conical ſeed-veſſels. It is biennial, grows wild by road-ſides, and flowers in July.

THE leaves of mullein, recommended as mild aſtringents, have a roughiſh drying kind of taſte, and very little ſmell. The flowers have alſo a ſlight roughiſhneſs, with a conſiderable ſweetneſs. A decoction of the leaves has lately been uſed with ſome ſucceſs in diarrhœas (a).

(a) Home's *Clin. Caſ. and Exp.*

VERBENA.

VERBENA Pharm. Edinb.(a) *Verbena communis flore cæruleo C. B. Hierobotane, herba ſacra, herba cephalalgica & periſterium quibuſdam. Verbena officinalis Linn.* VERVAIN: a plant with wrinkled, oblong, obtuſe leaves, deeply jagged and indented, ſet in pairs on the ſtalks, the upper ones divided into three ſegments: on the tops of the branches appear irregularly labiated blue flowers, in long ſpikes, without any leaves among them, followed each by four ſeeds incloſed in the cup. It is annual, grows wild in uncultivated places, and flowers in July or Auguſt.

This herb has been celebrated for abundance of virtues, for which its ſenſible qualities afford little or no foundation. It has no remarkable ſmell, and hardly any taſte.

VERONICA.

VERONICA: a low, ſomewhat hairy, trailing plant, with firm leaves ſet in pairs: from the joints ariſe ſlender pedicles, bearing ſpikes of blue monopetalous flowers, each of which is divided, as is the cup, into four ſegments, and followed by a flat bicellular capſule, which opens at the upper broad part and ſheds ſmall brown ſeeds.

1. VERONICA MAS *ſive Betonica pauli Ph. Edinb.*(a) *Veronica mas ſupina & vulgatiſſima C. B. Thea Germanica quibuſdam. Veronica officinalis Linn.* Male ſpeedwell: with crenated leaves of a roundiſh oval figure; thoſe on the flowering twigs, long, narrow, and not crenated. It is perennial, and grows wild on ſandy grounds and dry commons.

The leaves of veronica have a weak not diſagreeable ſmell, which in drying is diſſipated, and which they give over in diſtillation with water, but without yielding any ſeparable oil. To the taſte they are bitteriſh and roughiſh: an extract made from them by rectified ſpirit is moderately bitter and ſubaſtringent: the watery extract is weaker, though the quantity of both is nearly the ſame; whence ſpirit ſeems to extract their virtue more completely than water. This herb is of great eſteem among the Germans; in diſorders of the breaſt both catarrhous and ulcerous, and for purifying the blood and humours: infuſions of the leaves, which are not unpalatable, are drank as tea, and are found to operate ſenſibly by urine.

(a) Expunged.

2. TEUCRIUM *Act. med. berolinenſ.* *Chamædrys ſpuria major anguſtifolia C. B.* *Veronica Teucrium Linn.* Mountain ſpeedwell: with ſharply ſerrated leaves of a long oval figure; the lower embracing the ſtalk by a broad baſis. It is a native of Germany.

The leaves and flowers of this ſpecies have been greatly commended for dietetic infuſions; and ſaid to promote perſpiration and urine, to be in general ſalubrious, and medicinal in ſeveral diſorders *(a)*. Cartheuſer obſerves, that they impart to boiling water a greeniſh colour, a pleaſant balſamic ſmell, and a much more agreeable taſte than the preceding veronica. Among us they have not yet been introduced, nor is the plant common: what has uſually been called *teucrium* is a plant of another genus, a large ſpecies of germander.

VINCETOXICUM.

VINCETOXICUM, Aſclepias, Hirundinaria, Pharm. Edinb.(b) *Aſclepias albo flore C. B.* *Aſclepias Vincetoxicum Linn.* Swallow-wort, tame-poiſon: a plant with unbranched ſtalks; ſmooth oblong acuminated leaves ſet in pairs, and cluſters of white monopetalous flowers, each of which is divided into five ſections, and followed by two long pods full of a white cottony matter with ſmall browniſh ſeeds: the root is large, compoſed of a great number of ſlender ſtrings hanging from a tranſverſe head, externally browniſh, internally white. It is perennial, grows wild in gravelly grounds in ſome parts of England, and flowers in July.

THE root of vincetoxicum has, when freſh, a moderately ſtrong not agreeable ſmell, approaching to that of wild valerian, which in drying is in great part diſſipated; chewed, it impreſſes firſt a conſiderable ſweet-

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(a) Gohl, *Acta medica Berolinenſ. dec.* I. *vol.* ii. *n.* 5.

(b) Expunged.

neſs, which is ſoon ſucceeded by an unpleaſant ſubacrid bitteriſhneſs: an extract made from it by water, is moderately ſweetiſh, balſamic, and bitteriſh; the ſpirituous extract is ſtronger in taſte, proportionably ſmaller in quantity, and retains a part of the ſpecific flavour of the root. It is recommended as reſolvent, ſudorific, and diuretic; in catarrhal, cachectic, and ſcrophulous diſorders, and in uterine obſtructions; in doſes of from a ſcruple to a dram or more in ſubſtance, and three or four drams in infuſion. It has been employed by ſome of the Germans as an alexipharmac, and hence received the name of *contrayerva Germanorum*. Some have however ſuſpected it to poſſeſs noxious qualities, and obſerve that when freſh it excites vomiting. Among us it is ſcarcely ever made uſe of in any intention.

VINUM.

WINE: the fermented juice of the grape. It differs in colour, flavour, and ſtrength, partly from differences in the grape itſelf, but chiefly from different managements or additions. Five ſorts are employed in the ſhops as menſtrua for medicinal ſubſtances: *Vinum album*, Mountain: *Vinum album gallicum*, French white wine: *Vinum canarinum*, Canary or ſack: *Vinum rhenanum*, Rheniſh: *Vinum rubrum*, Red Port.

ALL wines conſiſt of an inflammable ſpirit, and water, ſeparable by diſtillation; an unctuous viſcid ſubſtance, which abounds particularly in the ſweet wines, as Canary, and impedes their diſſolving power; and an acid, obvious in ſome to the taſte, as in Rheniſh, which hence becomes an uſeful menſtruum for ſome bodies of the metallic kind, particularly iron and the antimonial regulus. In diſtillation, after the inflammable ſpirit has ariſen, they all yield more or leſs of a peculiar grateful acid; a groſſer tartareous acid remaining in the ſtill, along with the unctuous and mucilaginous matter. In long keeping, a part of the tartar is thrown off from the wine, and incruſtates the ſides of the caſk.

Media ſubſtantia vini Beccheri.

Wine, conſidered as a medicine, is a valuable cordial in languors and debilities; more grateful and reviving than the common aromatic infuſions and diſtilled waters, particularly uſeful in the low ſtage of malignant or other fevers, for raiſing the pulſe and ſupporting the vis vitæ, promoting a diaphoreſis, and reſiſting putrefaction. Dietetically, its moderate uſe is of ſervice to the aged, the weak, and the relaxed, and to thoſe who are expoſed to warm and moiſt, or to corrupted air: in the oppoſite circumſtances, it is leſs proper, or prejudicial. Externally, it is uſed as a corroborant, antiſeptic, and antiphlogiſtic fomentation.

The acid obtained from wine by diſtillation, apparently of a different nature from the acetous as well as from the native vegetable acids, ſeems to deſerve ſome regard, both as a medicine, and as a more elegant menſtruum, for iron and ſome other bodies, than the common acids.

With regard to the medical differences of wines, it may be obſerved, that the effects of the full-bodied are much more durable than thoſe of the thinner: that all ſweet wines are in ſome degree nutritious; the others not at all, or only accidentally ſo, by promoting appetite and ſtrengthening the organs concerned in digeſtion: that ſweet wines in general do not paſs freely by urine, and that they heat the conſtitution more than an equal quantity of any other, though containing full as much ſpirit: that thoſe which are manifeſtly acid paſs freely by the kidneys, and gently looſen the belly; and that moſt of the red ones are ſubaſtringent, and tend to reſtrain immoderate excretions.

VIOLA.

VIOLA Pharm. Lond. & Edinb. Viola martia purpurea flore ſimplici odoro C. B. Violaria. Viola odorata Linn. VIOLET: a low creeping plant, without any other ſtalk than the pedicles of the leaves and flowers: the leaves are roundiſh, ſomewhat heart-ſhaped, obtuſely crenated about the edges: the flower conſiſts of five irregular petala, of the deep purpliſh blue called, from the name of the plant, violet colour: the fruit is a little capſule divided into three cells, full of ſmall roundiſh ſeeds. It is perennial, grows wild in hedges and ſhady places, and flowers in March.

The flowers of a different ſpecies, greatly inferiour to the above, are frequently ſubſtituted in our markets. This ſort may be readily diſtinguiſhed; the herb, by its having ſtalks, which trail on the ground, and bear both leaves and flowers, and by the young leaves being hairy; the flower, by the three lower petala being ſpotted with white, and by their want of ſmell.

The officinal violet flowers have a very agreeable ſmell, and a weak mucilaginous bitteriſh taſte. Taken to the quantity of a dram or two, they are ſaid to be gently laxative or purgative; and the ſeeds, which have more taſte than the flowers, to be more purgative, and ſometimes emetic. The flowers give out to water both their virtue and their fine colour, but ſcarcely impart any tincture to rectified ſpirit, though they impregnate the ſpirit with their fine flavour, and probably alſo with their purgative quality. Syr. violar. An infuſion of two pounds of the freſh flowers in five† or eight‡ pints of boiling water, paſſed through a fine linen cloth without preſſure, is made in the ſhops into a ſyrup, which proves an agreeable laxative for children. Both the flowers themſelves and the ſyrup loſe their colour in being long kept: acids change them inſtantly into a red; alkalies, and ſundry combinations of acids with earthy and metallic bodies, to a green: perfect neutral ſalts, or thoſe compounded of an acid and alkali, make no alteration. Some have been accuſtomed to communicate to ſyrups a violet colour with materials of greater durability than the violet itſelf, or than any other blue flower: theſe ſophiſticated preparations may be diſtinguiſhed by their colour withſtanding alkalies and acids, or being affected by them in a different manner.

† *Ph. Lond.*
‡ *Ph. Edinb.*

* Viola tricolor *Linn.* Panſies, or heartſeaſe: this well known plant has lately been recommended by a German phyſician, Dr. Strack, as a ſpecific in the *cruſta lactea* of children. He directs a handful of the freſh, or half a dram of the dried leaves to be boiled in half a pint of milk, which is to be ſtrained for uſe. This doſe is repeated morning and evening. He obſerves, that when it has been adminiſtered eight days, the eruption uſually increaſes conſiderably, and the patient's urine acquires a ſmell like that of cats. When the medicine has been taken a fortnight, the ſcurf begins to fall off in large ſcales, leaving the ſkin clean. The remedy is to be perſiſted in, till the ſkin has reſumed its natural appearance, and the urine ceaſes to have any particular ſmell.

VIPERA.

VIPERA Pharm. Lond. & Edinb. *Coluber Berus Linn.* The Viper or Adder, a viviparous reptile, about an inch or leſs in thickneſs, and twenty or thirty in length, with a ſmall ſharp-pointed tail. It is found in the heat of ſummer, under hedges in unfrequented places; and in winter retires into holes in the earth.

The poiſon of this ſerpent is confined to its mouth. At the baſis of the phangs, or long teeth which it wounds with, is lodged a little bag containing the poiſonous liquid; a very minute portion of which, if mixed immediately with the blood, proves fatal; though it does not appear to be pernicious when ſwallowed, provided there is no ſolution of continuity in the parts which it comes in contact with *(a)*. Our viper-catchers are ſaid to prevent the miſchiefs otherwiſe following from the bite, by rubbing oil-olive warm upon the part.

The fleſh of the viper is perfectly innocent, and has been greatly commended as a medicine in ſundry diſorders. It appears to be very nutritious, and hence an uſeful reſtorative in ſome kinds of weakneſſes and emaciated habits: but in ſcrophulous, leprous, and other like diſtempers, the good effects, which have been aſcribed to it, are more uncertain: I have known a viper taken every day for above a month, in diſorders of the leprous kind, without any apparent benefit. The form in which they are uſed to beſt advantage, is that of broth, of which an elegant preparation is directed by the London college†; that the wines (made commonly by macerating for a week, with a gentle heat, two ounces of the dried fleſh in three pints of mountain‡) have any great virtue, cannot perhaps be affirmed from fair experience.

† Jus viperinum *Ph. Lon.*

‡ Vinum viperinum *P.L.*

The fat of the viper is accounted particularly uſeful in diſorders of the eyes; but what advantages it has above other ſoft fats, is by no means clear: ſee *Pinguedo.* It was formerly ſuppoſed to have ſome ſpecific power of reſiſting the poiſon of the viper's bite, by being rubbed immediately on the part; but experience has now ſhewn that common oil is in this intention of equal efficacy.

VIRGA AUREA.

VIRGA AUREA Pharm. Edinb.(b) Virga aurea anguſtifolia minus ſerrata C. B. Herba doria & Conſolida ſaracenica quibuſdam. Solidago Virga aurea Linn. GOLDEN ROD: a plant with long ſomewhat oval leaves, pointed at both ends, ſlightly or not at all indented; and upright

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(a) See Dr. Mead'*s Mechanical account of poiſons, eſſay* i.

(b) Expunged.

ſpikes, along the ſtalks, of ſmall yellow flowers, compoſed of ſeveral floſculi ſet in ſcaly cups, followed by ſmall ſeeds winged with down. It is perennial, grows wild in woods and on heaths, and flowers in Auguſt.

The leaves and flowers of golden rod are recommended as corroborants and aperients; in urinary obſtructions, nephritic caſes, ulcerations of the bladder, cachexies, and beginning dropſies. Their ſenſible qualities promiſe conſiderable medical activity: their taſte, which they readily impart both to water and rectified ſpirit, and which remains entire in the inſpiſſated extracts, is of a ſubtile penetrating durable kind, not very ungrateful, weak in the herb in ſubſtance, ſtrong in the watery extract, and ſtronger in the ſpirituous.

VISCUS.

VISCUS QUERNUS Ph. Edinb.(a) *Viſcum baccis albis C. B. Viſcum album Linn.* Misseltoe: a buſhy evergreen plant, with woody branches variouſly interwoven; firm narrow leaves, narroweſt at the bottom, ſet in pairs; and imperfect white flowers in their boſoms, followed each by a tranſparent white berry containing a ſingle ſeed. It grows only on the trunks and branches of trees, and may be propagated by rubbing the glutinous berries on the bark that the ſeeds may adhere.

The leaves and branches of miſſeltoe, formerly recommended as ſpecifics in convulſive and other nervous diſorders, and now fallen into general neglect, do not appear to have any conſiderable medicinal power. Inſtances have indeed been produced of their ſeeming to prove beneficial: but as there are, perhaps, no diſorders, whoſe nature is ſo little underſtood, whoſe cauſes are ſo various, and whoſe mitigations and exaſperations have leſs dependence upon ſenſible things; there are none in which medicines operate more precariouſly, and in which the obſerver is more liable to deception.

Half a dram or a dram of the wood or leaves in ſubſtance, or an infuſion of half an ounce, the doſes commonly directed, have no ſenſible effect. Both the leaves and branches have very little ſmell, and a very weak taſte, of the nauſeous kind. In diſtillation they impregnate water with their faint unpleaſant ſmell, but yield no eſſential oil. Extracts made from them by water are bitteriſh, roughiſh, and ſubſaline: the ſpirituous extracts, in quantity ſmaller than the watery, are in taſte ſtronger, nauſeous, bitteriſh, and ſubauſtere: the ſpirituous extract of the wood has the greateſt auſterity, and that of the leaves the greateſt bitteriſhneſs. The berries abound with an extremely tenacious, not ungrateful, ſweet mucilage.

(a) Expunged.

VITRIOLUM.

VITRIOLUM & Calcanthum Ph. Pariſ. VITRIOL: a ſaline cryſtalline concrete, compoſed of metal united with a certain acid called the vitriolic acid. There are three metals with which this acid is found naturally combined, zinc, copper, and iron: with the firſt it forms a white, with the ſecond a blue, and with the third a green ſalt.

1. VITRIOLUM ALBUM *Ph. Lond. Vitriolum album ſive Zinci Ph. Ed.* White vitriol, or vitriol of zinc; found in the mines of Goſlar, ſometimes in tranſparent pieces, more commonly in white efflorefcences; which are diſſolved in water, and cryſtallized into large irregular maſſes ſomewhat reſembling fine ſugar; in taſte ſweetiſh, nauſeous, and ſtyptic.

The common white vitriol of the ſhops contains a quantity of ferrugineous matter; of which, in keeping, a part is extricated from the acid, in an ochery form, ſo as to tinge the maſs of a yellow hue. On diſſolving the whiteſt pieces in water, a conſiderable portion of ochre immediately ſeparates: the filtered ſolution, tranſparent and colourleſs, becomes again turbid and yellow on being made to boil, and depoſites a freſh ochery ſediment; and a like ſeparation happens, though much more ſlowly, on ſtanding without heat. Hence, when the ſolution is evaporated to the uſual pitch, and ſet to cryſtallize, the cryſtals generally prove foul; unleſs ſome freſh acid be added (as an ounce of the ſtrong ſpirit or oil of vitriol to a pound of the ſalt †) to keep the ferrugineous matter diſſolved: this addition both ſecures the whiteneſs of the cryſtals, and prevents their growing ſoon yellow in the air. White vitriol generally contains alſo a ſmall portion of copper, diſtinguiſhable by the cupreous ſtain which it communicates to poliſhed iron immerſed in ſolutions of it, or rubbed with

† Sal vitrioli *Pharm. Lond.*

with it in a moiſt ſtate. The quantity of this metal is ſo exceedingly minute, that it is not, perhaps, of any inconvenience in the intentions for which white vitriol is commonly employed: the ſeparation, if it ſhould be thought neceſſary, may be effected, by boiling the ſolution for ſome time, along with bright pieces of iron, which will extricate all the copper: by continued or repeated coction, greateſt part of the ferrugineous matter alſo may be ſeparated.

White vitriol is ſometimes given, from five or ſix grains to half a dram and more, as an emetic; and appears to be one of the quickeſt in operation of thoſe that can be employed with ſafety. Its chief uſe is for external purpoſes, as a cooling reſtringent and deſiccative: a dilute ſolution of it, as ſixteen grains in eight ounces of water, with the addition of ſixteen drops of weak vitriolic acid, is an excellent collyrium in defluxions and ſlight inflammations of the eyes, and, after bleeding and purging, in the more violent ones: a ſolution of it with alum, in the proportion of two drams of each to a pint of water, is uſed as a repellent fomentation for ſome cutaneous eruptions, for cleanſing foul ulcers, and as an injection in the fluor albus and gonorrhœa when not accompanied with virulence. This vitriol is ſometimes likewiſe employed as an errhine, and ſaid to be a very effectual diſſolvent of mucous matters; in which intention it is recommended, in the German ephemerides, againſt obſtructions of the noſtrils in new-born infants.

Aqua vitriolica *Ph. Ed.*

Aqua aluminoſa bateana *Pharm. Lond.*

2. Vitriolum cæruleum *Ph. Lond.* *Vitriolum cæruleum ſive cupri Ph. Ed.* Blue vitriol, or vitriol of copper, commonly called Roman or Cyprian vitriol, or blue-ſtone. This kind of vitriol is in many places produced from ſulphureous ores of copper: the acid of ſulphur is no other than the vitriolic; and the inflammable principle of the ſulphur being diſſipated either by fire or by a ſpontaneous reſolution of the mineral, the acid remains combined with the copper (ſee *Pyrites*): the vitriol, now formed, is either extracted by the application of water, or waſhed out by rain or ſubterraneous waters: hence in ſome copper mines are found blue waters, which are true vitriolic ſolutions of copper, and which depoſite that metal on the addition of iron or of any other ſubſtance which the acid more ſtrongly attracts. The greateſt part of the blue vitriol, now met with in the ſhops, is prepared in England, by artificially combining copper with ſulphur or its acid.

The vitriol of copper is of an elegant ſapphire blue colour; hard, compact, and ſemitranſparent; when perfectly cryſtallized, of a flattiſh, rhomboidal, decahedral figure; in taſte extremely nauſeous, ſtyptic, and acrid. Expoſed to a gentle heat, it firſt turns white, and then of a yellowiſh red or orange colour: on increaſing the fire, it parts, difficultly, with its acid, and changes at length to a very dark red calx, reducible, by fuſion with inflammable fluxes, into copper.

This ſalt, like the other preparations of copper, acts, in doſes of a few grains, as a moſt virulent emetic. Its uſe is chiefly external, as a detergent, eſcharotic, and for reſtraining hemorrhagies: for which laſt intention, a ſtrong ſtyptic liquor is prepared in the ſhops, by diſſolving three ounces of blue vitriol and two† or three‡ of alum in a pint and a half† or two pounds‡ of water, then adding two ounces† or one and a half‡ of oil of vitriol, and filtering the mixture for uſe.

† Aqua vitriolica cærulea *Ph. L.*
‡ Aqua ſtyptica *Ph. Edin.*

* Blue vitriol has of late been conſiderably employed as an emetic by ſome practitioners; and is ſaid to be by no means an unſafe one, as it operates the inſtant it reaches the ſtomach, before it has time to injure by its corroſive quality. The peculiar advantage in uſing it is repreſented to be, that it has no tendency to become alſo purgative, and that its aſtringent power prevents the tone of the ſtomach from being impaired after vomiting with it. It is much recommended in the early ſtate of tubercles in the lungs; and the following method of exhibition is directed *(a)*. Let the patient firſt ſwallow about half a pint of water, and immediately afterwards, the vitriol diſſolved in a cup-full of water. The doſe may be varied according to age, conſtitution, &c. from two grains to ten, or even twenty; always taking care to begin with ſmall ones. After the emetic is rejected, another half pint of water is to be drunk, which is likewiſe ſpeedily thrown up, and this is commonly ſufficient to remove the nauſea.

In ſtill ſmaller doſes, the blue vitriol has been much uſed by ſome as a tonic in intermittents, and other diſeaſes.

3. VITRIOLUM VIRIDE *Pharm. Lond.* *Vitriolum viride, ſive ferri Pharm. Edinb.* Green vitriol, or vitriol of iron; commonly called Engliſh vitriol or copperas; the Roman vitriol of the Italian writers.

(a) Simmons, *on the Treatment of Conſumptions, p.* 70.

This ſort of vitriol is produced from ſulphureo-ferrugineous pyritæ, as the blue from ſulphureo-cupreous ones; and as the ferrugineous minerals are much eaſier of reſolution than the others, the ferrugineous vitriol is much oftener found native. In this native ſtate, neither ſort is free from an admixture of the other; the native green vitriols having always more or leſs of a blueiſh caſt, and the blue of a greeniſh. The common green vitriol is prepared in large quantity at Deptford and Blackwall near London, and at Newcaſtle, by boiling iron with the acid liquor, which runs from certain pyritæ after long expoſure to the air: this vitriol appears to be purely martial, for if it ſhould receive any cupreous particles from the mineral, the ſuperadded iron would precipitate them. All vitriols may be freed perfectly from copper by adding iron to ſolutions of them: thoſe, which contain even a ſmall portion of that metal, readily diſcover it by ſtaining the iron of a copper hue.

Pure vitriol of iron is conſiderably tranſparent, of a fine bright, though not very deep, graſs green colour; of a nauſeous aſtringent taſte accompanied with a kind of ſweetiſhneſs. Diſſolved, and ſet to cryſtallize, it ſhoots into thick rhomboidal maſſes; a part generally riſing at the ſame time in efflorescences about the ſides of the veſſel. The ſolution depoſites in ſtanding a conſiderable quantity, and in boiling a much larger one, of the metallic baſis of the vitriol, in form of a ruſty calx or ochre: iron ſeems to be the only metallic body that thus ſeparates ſpontaneouſly, in any conſiderable quantity, from the vitriolic acid. On expoſing the vitriol itſelf to a moiſt air, a ſimilar reſolution happens on its ſurface; which, ſooner or later, according as the acid is more or leſs ſaturated with the metal, changes its green to a ruſty hue. In a warm dry air, it loſes a part of the phlegm or water neceſſary to its cryſtalline form, and falls by degrees into a white powder. Expoſed to a gentle fire, it liquefies and boils up; but ſoon changes, on the exhalation of the watery part that rendered it fluid, to a ſolid, opake, whitiſh or grey maſs: this, pulverized and urged with a ſtronger fire, continues to emit fumes, becomes yellow†, afterwards red, and at length, having parted with moſt of its acid as well as its phlegm, turns to a deep purpliſh-red calx‡, revivable by inflammable ſubſtances into iron.

† Vitriolum calcinatum *Ph. L. & Ed.*

‡ Colcothar vitrioli *Phar. Lond. & Edin.* Chalcitis factitia *Phar. Pariſ.*

Pure green vitriol is in no reſpect different from the artificial *ſal martis*. It is one of the moſt certain of the chalybeate medicines, ſcarcely ever failing to take effect where the calces and other indiſſoluble preparations paſs inactive through the inteſtinal tube. It may be conveniently given in a liquid form, largely diluted with aqueous fluids: two or three grains or more, diſſolved in a pint or a quart of water (which from this quantity receives no diſagreeable taſte) may be taken in a day, divided into different doſes. This vitriol is uſed alſo, eſpecially when calcined, as an external ſtyptic: the ſtyptic of Helvetius, and as is ſaid that of Eaton, is no other than French brandy very ſlightly impregnated with the calcined vitriol: a dram of the vitriol is commonly directed to a quart of the ſpirit, but only a minute portion of the dram diſſolves in it. As French brandy has generally an aſtringent impregnation from the oaken caſks in which it has been kept, the vitriol changes it, as it does the watery infuſions of vegetable aſtringents, to a black colour; but makes no ſuch change in ſpirituous liquors that have not received ſome aſtringent tincture.

Tinctura ſtyptica *P.L.*

It is from the green vitriol that the acid called vitriolic has been generally extracted; by diſtilling the calcined vitriol in earthen longnecks, with a ſtrong fire continued for two days or longer. The diſtilled ſpirit appears of a dark blackiſh colour; and contains a quantity of phlegm, greater or leſs according as the vitriol has been leſs or more calcined. On committing it a ſecond time to diſtillation, in a glaſs retort placed in a ſand-heat, the phlegmatic parts riſe firſt, together with a portion of the acid, and are kept apart under the name of *ſpirit* or *weak ſpirit* of vitriol†: at the ſame time the remaining *ſtrong ſpirit*, or *oil* as it is called, loſes its black colour and becomes clear‡, and this is the uſual mark for diſcontinuing the rectification. The college of Edinburgh now directs a weak vitriolic acid of more certain ſtrength, made by mixing one part of the ſtrong acid with ſeven parts of water||.

The ſtrong acid or oil of vitriol is the moſt ponderous of unmetallic fluids, and the moſt fixed of ſaline ones, yielding no ſmell in the greateſt heat of the atmoſphere, and requiring, to make it boil or diſtil, a heat conſiderably greater than that in which lead melts. Expoſed to the air, it imbibes its humidity, ſo as to gain by degrees an increaſe of about twice its own weight. Mixed directly with water, it produces a heat ſo great as to render the veſſel inſupportable to the hand: glaſs veſſels are apt to crack from the ſuddenneſs of the heat, unleſs the commixture is

† Spir. vitrioli tenuis *Pharm. Lond.*

‡ Acidum vitriolicum *Pharm. Edin.* Spir. vitrioli fortis *Ph. L.*

|| Acidum vitriolicum tenue, *vulgo* Spiritus vitrioli tenuis *Pharm. Edin.*

very ſlowly performed. The moſt ready method of diſtinguiſhing it, in a dilute ſtate, or when mixed with other acids, is by adding a ſolution of ſome calcareous earth, as chalk, made in any kind of acid liquor: this ſolution is by a minute portion of the vitriolic acid rendered milky, but ſuffers no change from any other ſpecies of acid; ſee *Selenites*.

Spir. vitrioli volat. *Stahl.*

If the long-neck, in the extrication of the acid from vitriol, happens to crack in the fire, the acid that riſes after this period is found remarkably changed. It emits in the air ſuffocating vapours like the fumes of burning brimſtone, and riſes in diſtillation with a heat not much greater than that which the hand can bear: to the taſte it diſcovers little corroſiveneſs or acidity. Combined with alkaline ſalts, it loſes its pungent odour; but on the addition of any other acid, it is diſengaged from the alkali, ſo as to riſe again in diſtillation as volatile and ſuffocating as before. It deſtroys or whitens the blue and red colours of the flowers of plants; whereas, in its fixt ſtate, like the other acids, it changes the blue to red, and heightens thoſe which are naturally red. This volatile ſpirit loſes its ſuffocating odour, and reſumes its corroſiveneſs, fixedneſs, and other qualities, by expoſure to the air, which ſeems to carry off the inflammable principle whereon its volatility depended.

Aqua ſulphurata *Ph. Lond.* Gas ſulphuris *vulgo.*

The fumes of burning brimſtone are no other than the vitriolic acid in its volatile ſtate; ſee *Sulphur*. If a little burning ſulphur be ſuſpended over ſome water in a cloſe veſſel till the fumes ſubſide, and this repeated with freſh portions of ſulphur, till about half a pound has been uſed to a quart of water, the liquor will be found ſtrongly impregnated with the volatile ſuffocating acid, and in keeping for ſome time, if the veſſel is not cloſely ſtopt, it will become exactly ſimilar to water acidulated with the fixt acid. If a very large glaſs, open at bottom, be hung over the burning ſulphur, in a damp place ſcreened from wind, a part of the fumes will condenſe upon the ſides of the glaſs, and run down in drops, which may be collected by placing a glaſs diſh underneath: the acid thus obtained is called, from the ſhape of the veſſel that has been generally uſed for condenſing the fumes, ſpirit or oil of ſulphur by the *bell*. The quantity of acid collected by this proceſs is very ſmall, greateſt part of the fumes eſcaping: ſixteen ounces of ſulphur, in the moſt favourable circumſtances, yield ſcarcely one ounce of phlegmatic ſpirit; though it is certain, that out of this quantity of ſulphur, more than fifteen ounces are pure acid, of ſuch ſtrength, as to require being diluted with above an equal quantity of

Spir. ſulph. per campanam *Ph. L.*

of water to reduce it to the pitch of common ſpirit of ſulphur; ſo that if ſulphur could be burnt without the loſs of any of its fumes, we might obtain double its weight of an acid of the ordinary ſtrength. The proceſs has lately been improved, by ſome particular perſons, though not perhaps to this degree, yet ſo far as to afford at a very low price almoſt all the acid now ſold under the name of oil of vitriol. The improvement conſiſts chiefly in burning the ſulphur in very large glaſs veſſels, in the bottoms of which ſome warm water is placed, whoſe ſteam ſerves to collect and condenſe the fumes.

The acid of vitriol or ſulphur, largely diluted ſo as to be ſupportable or but gratefully tart to the palate, is the moſt ſalubrious of all the mineral acids. It is mixed with watery infuſions, ſpirituous tinctures and other liquids, as an antiphlogiſtic; as a reſtringent in hemorrhagies; and as a ſtomachic and corroborant in weakneſſes, loſs of appetite, and decays of conſtitution, accompanied with ſlow febrile ſymptoms, brought on by irregularities, or ſucceeding the ſuppreſſion of intermittents by Peruvian bark. In ſeveral caſes of this kind, after bitters and aromatics of themſelves had availed nothing, a mixture of them with the vitriolic acid has happily taken place: the form commonly made uſe of is that of a ſpirituous tincture: ſix ounces of oil of vitriol are dropt by degrees into a quart of rectified ſpirit of wine, the mixture digeſted for three days in a very gentle heat, and afterwards digeſted for three days longer with an ounce and a half of cinnamon, and an ounce of ginger †; or a pint of an aromatic tincture drawn with proof ſpirit is mixed with four ounces of the ſtrong acid ‡: theſe liquors are given from ten to thirty or forty drops, in any convenient vehicle, at ſuch times as the ſtomach is moſt empty. A mixture of oil of vitriol with ſpirit of wine alone, in the proportion of one part of the former to three of the latter, digeſted together for ſome time, is uſed in France as a reſtringent in gonorrhœas, female fluors, and ſpittings of blood.

† Elixir vitrioli *Ph. E.*

‡ Elix. vitrioli acidum *Phar. Lond.*

Aqua rabelliana *vulgo* Eau de Rabel. *P. Pariſ.*

* This acid, diluted with water, has been given internally with great ſucceſs in the itch. It was firſt uſed for this purpoſe in the Pruſſian army in 1756, and has ſince been much employed in ſeveral parts of Germany. The doſe recommended is from an eighth to a fourth of a dram of the pure acid twice or thrice a day. It is ſaid to ſucceed equally in the dry

and moiſt itch; and when given to nurſes, to cure both themſelves and their children.

Spiritus vitrioli dulcis.

Ol. vitrioli dulce *Hoffm.*

When oil of vitriol and rectified ſpirit of wine are long digeſted together or diſtilled, a part of the acid unites with the vinous ſpirit into a new compound, very volatile and inflammable, of no perceptible acidity, of a ſtrong and very fragrant ſmell, and an aromatic kind of taſte: this dulcified part, more volatile than the reſt, ſeparates and riſes firſt in diſtillation, and may thus be collected by itſelf. The college of London directs a pound of oil of vitriol and a pint of rectified ſpirit of wine to be cautiouſly and gradually mixed (a great conflict and heat enſuing if they are mixed haſtily) and ſet to diſtil with a very gentle heat: that of Edinburgh orders the ſame quantity of the oil of vitriol to be dropt into four times as much of the vinous ſpirit, and the mixture to be digeſted in a cloſe veſſel, for eight days, previouſly to the diſtillation, with a view to promote the coalition of the two ingredients. The different proportions of the acid ſpirit to the vinous, in theſe preſcriptions, make no material variation in the qualities of the product, provided the diſtillation is duly conducted; for the ſmalleſt of the above proportions of acid is much more than the vinous ſpirit can dulcify, and all the redundant acid remains in either caſe behind. The true dulcified ſpirit riſes in thin ſubtile vapours, which condenſe upon the ſides of the recipient in ſtraight ſtriæ: theſe are ſucceeded by white fumes, which form either irregular ſtriæ or large round drops like oil; on the firſt appearance of which, the proceſs is either to be ſtopt, or the receiver changed. The ſpirit which theſe fumes afford, very different from the dulcified one, has a pungent acid ſmell like the fumes of burning ſulphur: on its ſurface is found a ſmall quantity of oil, of a ſtrong penetrating and very agreeable ſmell, readily diſſoluble in ſpirit of wine, to a large proportion of which it communicates the ſmell and taſte of the aromatic or dulcified ſpirit. The college of Edinburgh, in order to ſecure againſt any acidity in the dulcified ſpirit, order it to be rectified, by mixing it with an equal meaſure of water, in every pint of which a dram of ſalt of tartar has been diſſolved, and drawing off the ſpirit again by a gentle heat*(a).

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*(a) The Edinburgh college, in their laſt pharmacopœia, have manifeſtly ſhewn how little they conceive the acid to enter as a conſtituent part of this preparation, and at the ſame time have directed an effectual method of preventing its preſence in it. They order the *acidum vitriolicum vinoſum*, vulgo *ſpiritus vitrioli dulcis*, to be made by ſimply mixing one part of vitriolic ether with two of rectified ſpirit.

This ſpirit, taken from ten to eighty or ninety drops, ſtrengthens the ſtomach and digeſtive powers, relieves flatulencies, promotes urine, and in many caſes abates ſpaſmodic ſtrictures, and procures reſt. It is not eſſentially different from the celebrated mineral anodyne liquor of Hoffman; to which it is frequently, by the author himſelf, directed as a ſubſtitute. It is evident, from Hoffman's writings, that his anodyne was compoſed of the dulcified ſpirit and the aromatic oil which comes over after it, but the particular proportions of the two he has no where ſpecified: the faculty of Paris directs, under the title of his preparation, twelve drops of the oil to be diſſolved in two ounces of the ſpirit; the college of Wirtemberg ſeems to think, that all the oil, and all the ſpirit, obtained in one operation, were mixed together, without regard to the preciſe quantities.

Liquor anodynus mineralis *Hoffm.*

The dulcified ſpirit is ſometimes uſed as a menſtruum for certain reſinous and bituminous bodies, which are more difficultly and languidly acted upon by pure vinous ſpirits. It is often mixed with aromatic and ſtomachic tinctures, in caſes where the ſtomach is too weak to bear the acid elixirs above mentioned: eight ounces are commonly added to a pint of the officinal aromatic tincture†, in which it does not, like the acid undulcified, occaſion any precipitation; or the ingredients of the aromatic tincture are infuſed in the dulcified acid, inſtead of common rectified ſpirit‡. A medicine of this kind was formerly in great eſteem under the name of Vigani's volatile elixir of vitriol, the preparation of which was long kept a ſecret, and firſt made public in the *pharmacopœia reformata:* it is prepared by macerating, in ſome dulcified ſpirit of vitriol free from acidity, a ſmall quantity of mint leaves curiouſly dried, till the ſpirit has acquired a fine green colour: to prevent the neceſſity of filtration, during which the more volatile parts would exhale, the mint may be ſuſpended in the ſpirit in a fine linen cloth.

Elix. vitrioli dulce † *P. L.*

‡ *Ph. Edinb.*

If the dulcified ſpirit, rectified as above preſcribed from a ſolution of fixt alkaline ſalt, be ſhaken with equal its quantity of a like ſolution, and the mixture ſuffered to reſt; an ethereal fluid riſes to the ſurface, and great part of the dulcified ſpirit may be recovered again from the remainder by diſtillation. I am informed by Dr. Hadley, that he has obſerved the largeſt proportion of ether to be obtained, by uſing the ſtrongeſt vitriolic acid of the ſhops with equal its quantity by meaſure of ſpirit of wine, and diſtilling immediately by a heat ſufficient to make the mixture boil; and that by this management, from three pints of oil of vitriol, and ſix pints of rectified ſpirit of wine, he obtained two pints and a half of the ether. * The following is the method preſcribed for making ether, in the laſt Edinburgh pharmacopœia. To thirty-two ounces of rectified ſpirit of wine in a glaſs retort, add at once an equal weight of ſtrong ſpirit of vitriol. Mix them gradually by gentle agitation, and immediately ſet them to diſtil in ſand previouſly heated, ſo that the mixture may be brought as ſoon as poſſible to boil, in which heat it is to be continued till ſixteen ounces are come over. The receiver muſt be cooled by water or ſnow. To this diſtilled liquor, two drams of the ſtrong alkaline cauſtic are to be added, and the diſtillation repeated in a very high retort, with a very gentle heat, till ten ounces are come over. To the reſiduum after the firſt diſtillation may be added ſixteen ounces of freſh rectified ſpirit, when more ether will be procured; and this may be ſeveral times repeated.

Liquor æthereus vitriolicus *Ph. Ed.*

The ether or ethereal ſpirit is the lighteſt, moſt ſubtile, volatile, and inflammable, of all known liquids: it quickly exhales in the air, diffuſing an odour of great fragrance: it does not mingle with water, with acid liquors, with alkaline liquors, or with vinous ſpirits, at leaſt not in any conſiderable quantity, only a ſmall portion of the ether being imbibed by them: it unites with oils in all proportions, diſſolves balſams, and reſins, and extracts the oily and reſinous parts of vegetables. It has been hitherto regarded chiefly as a matter of curioſity, nor are its medicinal qualities as yet much known*(a). Malouin looks upon it as one of the moſt perfect tonics, friendly to the nerves, cordial and anodyne; and ſays he has found it to be a good remedy in rheums, for abating coughs, eſpecially thoſe of the convulſive kind. Its great volatility renders the taking of it very incommodious: the author above mentioned orders, as the moſt convenient form, from three to twelve drops to be dropt on ſugar or powdered liquorice, a little warm water or ſome warm infuſion to be immediately added, and the whole ſwallowed directly. It has been reported to give immediate eaſe in violent headachs, by being rubbed on the temples.

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*(a) It has ſince come more into uſe in flatulent and ſpaſmodic complaints, the gout in the ſtomach, nervous aſthmas, and the like. Though it will not mix with water, it may be diffuſed in a ſufficient quantity of it ſo as to be taken without much difficulty.

The vitriolic acid ſaturates a larger quantity of fixt alkaline ſalts than any of the other acids, and diſlodges therefrom ſuch other acids as have been previouſly combined with them: of the ſtrong ſpirit or oil of vitriol, about five parts are ſufficient for eight of the common vegetable fixt alkalies. The neutral ſalt reſulting from its coalition with this kind of alkali, is of a bitteriſh taſte, very difficultly ſoluble in water, and ſcarcely fuſible in the fire: in ſmall doſes, as a ſcruple or half a dram, it is an uſeful aperient; in larger ones, as four or five drams, a mild cathartic, which does not paſs off ſo haſtily as the *ſal catharticus*, and ſeems to perform its office more thoroughly. This ſalt has been commonly prepared with the alkali obtained from tartar, and is hence called vitriolated tartar: ſome dilute the oil of vitriol with ſix times the quantity of warm water, and drop into it a ſolution of the alkaline ſalt till a freſh addition occaſions no further efferveſcence: others, inſtead of the pure acid, uſe vitriol in ſubſtance, which being diſſolved in boiling water, any alkaline ſalt, gradually ſuperadded till the efferveſcence ceaſes, abſorbs the pure acid, and throws down the metallic baſis of the vitriol; one part of the alkali is nearly ſufficient for two of the vitriol. This laſt method, more troubleſome than the other in regard to the preparation, more effectually ſecures the medicine from a redundance of acidity. The wholeſale dealers ſubſtitute for this ſalt that which remains after the extraction of the acid of nitre by means of oil of vitriol, which, when duly prepared, is exactly the ſame (ſee *Nitrum*): but as they commonly employ in that proceſs an over-proportion of the vitriolic acid, and vend the remaining ſalt uncryſtallized, we often meet with it ſo very acid as to be utterly unfit for uſe.

Tartarum vitriolatum.

Sal enixum & Arcanum duplicatum *quibuſdam.*

Ph. Edinb.

Ph. Lond.

With the mineral fixt alkali, and the earth called magneſia, this acid forms compound ſalts of a bitterer taſte, ſomewhat leſs purgative, and much eaſier of ſolution, than that with vegetable alkalies: with volatile alkalies a very pungent ammoniacal ſalt, whoſe medicinal effects are not well known. The ſtrong acid, boiled on argillaceous earths to dryneſs, corrodes a portion of them, and concretes therewith into an auſtere ſtyptic ſalt. Calcareous earths it does not diſſolve into a liquid ſtate, but may be combined with them, by precipitation from other acids, into an indiſſoluble concrete ſeemingly of no medicinal activity. Among metallic bodies, it diſſolves zinc and iron readily; copper, ſilver, quickſilver, lead, and tin, very difficultly: it is fitted for acting on the two firſt by dilution with three or four times its quantity of water: the others require the undiluted acid, and a heat ſufficient to make it boil; when, the more phlegmatic parts exhaling, ſo much of the pure acid matter remains combined with the metals, as to render them, in part at leaſt, diſſoluble in water; ſee the reſpective metals.

The medical qualities of the acid in its volatile ſtate are very little known, and thoſe of the combinations thereof with alkalies not at all, though they ſhould ſeem to deſerve enquiry. The volatile acid of burning brimſtone may be commodiouſly transferred into fixt alkalies, by dipping linen clothes in a ſtrong ſolution of the alkali and ſuſpending them over the fumes, of which they will quickly imbibe ſo much as to neutralize the alkali: this neutral ſalt being rubbed off, the clothes may be again moiſtened with the alkaline lye, expoſed to the acid fumes, and theſe proceſſes alternately repeated *(a)*. The neutral ſalt thus obtained differs greatly in its taſte and other properties, and doubtleſs alſo in its medical virtues, from that which is produced by the coalition of the fixt acid with the ſame alkali, that is, from vitriolated tartar. It diſſolves more eaſily in water, and ſhoots, not into octangular cryſtals, but into ſmall ſlender ones like ſhort needles. On adding to it the fixt vitriolic acid (or even the weaker acids of nitre or ſea-ſalt) the volatile acid is diſengaged from the alkali; and though, in the compound ſalt, its pungent ſmell was wholly ſuppreſſed, it now riſes in diſtillation as pungent and ſuffocating as the original fumes of the brimſtone. The neutral ſalt, in a dry form, may be kept unchanged for years: diſſolved in water, and expoſed for ſome time to the air, or if roaſted with a gentle heat, it becomes the ſame with vitriolated tartar.

ULMARIA.

ULMARIA ſive Regina prati Pharm. Edinb.(b) Barba capræ floribus compactis C. B. Spiræa Ulmaria Linn. MEADOWSWEET or QUEEN-OF-THE MEADOWS: a plant with tall, ſmooth, reddiſh, brittle ſtalks; and oval, ſharp-pointed, indented leaves, ſet in pairs along a middle rib, with ſmaller pieces between, and at the end a larger odd one divided into three ſections, wrinkled and green above, white underneath:

(a) *Vide* Stahlii *Experimenta & animadverſiones* ccc.

(b) Expunged

on the tops come forth large thick cluſters of little whitiſh flowers, followed each by ſeveral crooked ſeeds ſet in a roundiſh head. It is perennial, common in moiſt meadows, and flowers in June.

The leaves of ulmaria recommended as mild aſtringents, diſcover to the taſte or ſmell very little foundation for any medical virtues. The flowers have a ſtrong and pleaſant ſmell, in virtue of which they are ſuppoſed to be antiſpaſmodic and diaphoretic, and which in keeping is ſoon diſſipated, leaving in the flowers only an inſipid mucilaginous matter. As theſe flowers are more rarely uſed in medicine than their fragrant ſmell might rationally perſuade, Linnæus ſuſpects that the neglect of them has ariſen from the plant being poſſeſſed of ſome noxious qualities, which it ſeemed to betray by its being left untouched by cattle: it may be obſerved, however, that the cattle, which refuſed the ulmaria, refuſed alſo angelica, and other herbs, whoſe innocence is apparent from daily experience.

ULMUS.

ULMUS Pharm. Edinb. *Ulmus campeſtris & theophraſti C. B. Ulmus campeſtris Linn.* Elm: a tall common tree; covered with a rough, chapt, browniſh, brittle bark, under which lies a white, ſmooth, tough, coriaceous one; producing in the ſpring, before the leaves appear, imperfect flowers, followed by flat roundiſh capſules, containing each a ſingle ſeed.

The inner tough bark of the elm tree, of no manifeſt ſmell, diſcovers, on being chewed, a copious ſlimy mucilage, of no particular taſte: the outer brittle bark is much leſs ſlimy, but equally void of ſmell and taſte. It may therefore be preſumed, that if elm bark has been found of uſe in nephritic caſes, in which it is recommended by authors; or externally againſt burns, for which it is applied by the common people; it was of uſe no otherwiſe than as a ſimple emollient. Neither the purgative virtue aſcribed to it by ſome, nor the aſtringent by others, appear to have any foundation.

*A decoction of the inner bark of elm has been employed in cutaneous diſeaſes in ſome of our hoſpitals; and an account of its efficacy has been publiſhed by Dr. Lyſons in Vol. II. of *Medical Tranſactions*, and ſince, in a ſeparate work. In making this decoction, four ounces of the bark freſh from the tree are boiled in two quarts of water to one. It is of a beautiful light purple colour, when the elm is in flower; but browner at other times. Its taſte is mildly aſtringent; and an extract from it is very auſtere. It has no purgative effects, as ſome have alledged, but rather the contrary. Where it ſucceeds, it generally at firſt increaſes the efflorefcence. Patients are uſually directed to drink half a pint twice a day, and to perſiſt in the uſe of it ſome months.

URINA.

URINA Ph. Pariſ. URINE. The recent urine of healthful ſubjects is nauſeouſly bitter, very ſaline, ſcarce manifeſtly alkaline or acid. As ſoon as it begins to putrefy, it emits volatile alkaline vapours; and if diſtilled, when moderately putrefied, by a gentle heat, it yields a concrete volatile alkaline ſalt: as volatile alkalies have a ſtrong antiſeptic power, the vapours of putrefied urine are not obſerved, like thoſe of cadaverous animal ſubſtances, to be productive of putrid diſeaſes. A pungent cauſtic volatile ſpirit may likewiſe be obtained from recent urine, by inſpiſſating, and then diſtilling it with the addition of quicklime.

If the putrefied urine be ſlowly inſpiſſated, in glaſs or ſtone-ware veſſels, to the conſiſtence of a thin ſyrup, and ſet for ſome weeks in a cold place, brown cryſtals will ſhoot from it, conſiſting partly of marine ſalt, and partly of a ſalt of a peculiar kind, which ſhoots before the marine, and which, by repeated ſolutions, filtrations, and cryſtallizations, may be purified both from that ſalt and from the adhering oil. In this ſtate †, it appears perfectly neutral, and impreſſes on the tongue a ſenſe of coolneſs with a ſlight bitteriſhneſs: laid on a red-hot iron, it bubbles, emits volatile alkaline vapours, and runs into a colourleſs pellucid ſubſtance reſembling fine glaſs: this apparent glaſs is manifeſtly acid, though but weakly ſo, diſſolves in water, neutralizes alkaline ſalts, and with volatile alkalies regenerates the original neutral ſalt. One of its moſt diſtinguiſhing characters is, that a mixture of it with inflammable matters, as ſoot or powdered charcoal, on being heated to ignition in an open veſſel, emits flaſhes like lightening, and, on being diſtilled in a retort with a moderately ſtrong fire, yields the highly inflammable concrete called phoſphorus.

† Sal microcoſmicum, *ſive* ſal eſſentiale urinæ.

Urine is ſometimes applied externally, boiled with bran, as a reſolvent and diſcutient, in which intentions it is ſaid to be very efficacious. Recent cows urine has been drank in the ſpring, to the quantity of a pint or more every morning, for ſeveral days, as an attenuant and deobſtruent in different diſorders: the nauſeous draught purges plentifully by ſtool, and ſometimes vomits. The peculiar ſalt of urine is but of late diſcovery, and its medicinal qualities are as yet unknown.

URTICA.

URTICA Pharm. Edinb. Urtica urens maxima C. B. Urtica dioica Linn. COMMON STINGING NETTLE. Infuſions and decoctions of this herb, or its expreſſed juice, are recommended in different diſorders as aperients, and ſaid to looſen the belly: the juice, depurated and gently inſpiſſated, diſcovers a conſiderable taſte, of the ſubſaline kind.

UVÆ PASSÆ.

RAISINS: rich ſweet grapes, dried by the ſun's heat in the warmer parts of Europe. Two ſorts are directed for medicinal uſe. 1. UVÆ PASSÆ MAJORES *Pharm. Lond. Paſſulæ majores Pharm. Edinb.* Raiſins of the ſun; the fruit of the *vitis damaſcena* dried upon the tree; the ſtem of each cluſter, when the grapes are ripe, being cut almoſt through, ſo as to prevent the afflux of any freſh juice. 2. UVÆ PASSÆ MINORES *ſeu* CORINTHIACÆ. Currants; the fruit of the *vitis corinthiaca* picked from the ſtalks.

THESE fruits are uſed as agreeable lubricating aceſcent ſweets, in pectoral decoctions, and for obtunding the acrimony of other medicines and rendering them acceptable to the palate and ſtomach: the firſt ſort inclines moſt to acidity, the ſweetneſs of the latter being more of the mucilaginous kind. They both give out their ſweetneſs and their pleaſant flavour to water and ſpirit: the ſtones or ſeeds are ſuppoſed to communicate a diſagreeable reliſh, and hence are generally directed to be taken out; but it did not appear on trial that they give any taſte at all to water, proof ſpirit, or rectified ſpirit.

UVA URSI.

UVA URSI: Vitis idæa foliis carnoſis & veluti punctatis, ſive idæa radix dioſcoridis C. B. Arbutus (Uva Urſi) cauliculis procumbentibus, foliis integerrimis Linn. BEARS WHORTLEBERRY: an evergreen trailing ſhrubby plant; with numerous ſmall oblong oval leaves; monopetalous white flowers with a fleſh-coloured edge cut into five ſections; and red berries. It greatly reſembles the common red whort-buſh; from which it may be diſtinguiſhed, by the leaves being more oblong, and by the flower having ten ſtamina, and the berry five ſeeds; whereas the flower of the common whort has only eight ſtamina, and the berry often twenty ſeeds. It is found on the ſnowy hills of Auſtria and Styria, but more plentifully on the Swediſh hills. It is alſo a native of the Highlands of Scotland, and is now cultivated in ſome of our gardens.

THE leaves of this plant have a bitteriſh aſtringent taſte; without any remarkable ſmell, at leaſt in the dry ſtate in which they have been brought to us from Germany. Infuſions of them in water ſtrike a deep black colour with ſolution of chalybeate vitriol, but ſoon depoſite the black matter, and become clear: I do not recollect any other aſtringent infuſion, from which the blackneſs, produced by vitriol, ſeparates ſo very ſpeedily.

The leaves of uva urſi have of late been greatly celebrated in calculous and nephritic complaints, and other diſorders of the urinary organs: the doſe is half a dram of the powder of the leaves, every morning, or two or three times a day. De Haen relates, after large experience of this medicine in the hoſpital of Vienna, that ſuppurations, though obſtinate and of long continuance, in the kidneys, ureters, bladder, urethra, ſcrotum and perinæum, where there was no venereal taint or evident marks of a calculus, were in general completely cured by it: that of thoſe who had a manifeſt calculus, ſeveral found permanent relief, ſo that, long after the medicine had been left off, they continued free from pain or inconvenience in making water, though the catheter ſhewed that the calculus ſtill remained: that others, who ſeemed to be cured, relapſed on leaving off the medicine, were again relieved on repeating its uſe, and this for ſeveral times ſucceſſively; while others obtained from it only temporary and precarious relief, the complaints being often as ſevere during the continuance of the medicine as when it was not uſed. It may be obſerved, that in ſeveral caſes which he relates, paregorics were joined to the uva urſi; and that other mild aſtringent plants have been recommended for the ſame intentions; from ſome of which De Haen himſelf expects the ſame good effects. The trials of the uva urſi, made in this country, have by no means anſwered expectation: in all the caſes that have come to my knowledge, it produced great ſickneſs and uneaſineſs, without any apparent benefit, though continued for a month.

**WINTERANUS CORTEX.*

WINTERANUS CORTEX, Cortex magellanicus. WINTER'S BARK. The tree producing the Winter's bark *(Winterana aromatica Soland.)* is one of the largeſt foreſt trees on *Terra del Fuego.* Its leaves are ever-green, ſmooth, oval, and entire. Its flowers conſiſt of ſeven petals, with from fifteen to thirty ſtamina, and from three to ſix germina, terminating in as many ſtigmata. Each germen becomes a ſeed-veſſel, containing ſeveral ſeeds. The bark of the trunk of the tree is externally grey, and very little wrinkled.

The Winter's bark, which takes its name from Capt. Winter, who diſcovered it on the coaſt of Magellan in 1577, is brought to us in pieces of different degrees of thickneſs, from a quarter to three quarters of an inch. It is of a dark brown cinnamon colour, with an aromatic ſmell when rubbed, and of a pungent, hot, ſpicy taſte, which is laſting on the palate, though imparted ſlowly. A watery infuſion of it ſtruck a black colour with a ſolution of green vitriol. From an infuſion of two ounces of the bark, coarſely powdered, was obtained on evaporation an extract weighing two drams and twenty-four grains. The ſame quantity, treated with rectified ſpirit, yielded two drams of extract. A pound of the bark was infuſed in a proper quantity of water, and the liquor ſubmitted to diſtillation. The diſtilled water was clear, of a pleaſant taſte, and ſomewhat of the cinnamon flavour. There was no appearance of eſſential oil. The reſiduum afforded ſix ounces of a ſoft extract, of a grateful aromatic taſte.

A mixture of this bark ſeemed very effectually to cover and correct the diſagreeable taſte and ſmell of certain drugs; a property common to it with the canella alba.

Almoſt the only uſe hitherto made of the Winter's bark has been by the crews of ſhips navigating the ſtreights of Magellan, as a preſervative from the ſcurvy. It has been confounded in the ſhops with the canella alba, from which it is totally different.

An exact deſcription of the plant, with a figure, is contained in a paper publiſhed in the *Medical Obſ. and Inq.* Vol. V. from whence this account is extracted.

ZEDOARIA.

ZEDOARIA Pharm. Lond. & Edinb. Zedoaria longa & Zedoaria rotunda C. B. ZEDOARY: the root of an Indian plant, (*Amomum ſcapo nudo, ſpica laxa truncata, Berg. Mat. Med.*) brought over in oblong pieces, about the thickneſs of the little finger and two or three inches in length; or in roundiſh ones † about an inch in diameter; of an aſh-colour on the outſide, and white within. The long ſort is ſaid by ſome to be the ſtrongeſt, but the difference, if any, is very inconſiderable, and hence the college allows both to be uſed indiſcriminately.

† Zerumbeth *P. Pariſ.*

THIS root has an agreeable ſmell, and a bitteriſh aromatic taſte. It impregnates water with its ſmell, a ſlight bitterneſs, a conſiderable warmth and pungency, and a yellowiſh brown colour: the reddiſh-yellow ſpirituous tincture is in taſte ſtronger, and in ſmell weaker, than the watery. In diſtillation with water, it yields a thick ponderous eſſential oil, ſmelling ſtrongly of the zedoary, in taſte very hot and pungent: the decoction, thus deprived of the aromatic matter, and concentrated by inſpiſſation, proves weakly and diſagreeably bitter and ſubacrid. A part of its odorous matter riſes alſo in the inſpiſſation of the ſpirituous tincture: the remaining extract is a very warm, not fiery, moderately bitter aromatic, in flavour more grateful than the zedoary in ſubſtance.

Zedoary root is a very uſeful warm ſtomachic. It was employed by ſome as a ſuccedaneum to gentian root; at a time when a poiſonous article, mixed with the gentian brought from abroad, rendered its uſe hazardous: but from the above analyſis it appears to be not entirely ſimilar to that ſimple bitter; its warm aromatic part being the prevailing principle, in virtue of which, its ſpirituous extract (the moſt elegant preparation of it) is made an ingredient in the cordial confection of the London pharmacopœia.

ZIBETHUM.

ZIBETHUM.

ZIBETHUM Ph. Edinb.(a) Civetta. CIVET: a ſoft unctuous odoriferous ſubſtance, about the conſiſtence of honey or butter; of a whitiſh, yellowiſh, or browniſh colour, and ſometimes blackiſh; brought from the Brazils, the coaſt of Guinea, and the Eaſt Indies; found in certain bags ſituated in the lower part of the belly of an animal of the cat kind*(b). The bag has an aperture externally, by which the civet is ſhed or extracted.

THIS ſubſtance has a very fragrant ſmell, ſo ſtrong as, when undiluted, to be diſagreeable; and an unctuous ſubacrid taſte. It is uſed chiefly in perfumes, rarely or never for medicinal purpoſes, though the ſingular effects which muſk has been lately found to produce may ſerve as an inducement to the trial. It unites with oils, both expreſſed and diſtilled, and with animal fats: in watery or ſpirituous liquors it does not diſſolve, but both menſtrua may be ſtrongly impregnated with its odoriferous matter, water by diſtillation, and rectified ſpirit by digeſtion: by trituration with mucilages, it becomes ſoluble in water.

ZINCUM.

ZINCUM Pharm. Edinb. ZINC, or TUTENAG: a blueiſh white metal; crackling, in being bent, like tin, and quickly breaking; about ſeven times ſpecifically heavier than water; beginning to melt in a moderate red heat, and very ſlowly calcining on a continuance of the fire; in a moderate white heat flowing thin, burning, fulgurating, with a bright deep green or blueiſh green flame, and ſubliming into light white flowers, which concrete about the upper part of the veſſel, or on the bodies adjacent, into thin cruſts, or ſoft looſe filaments like down or cobwebs. In its metallic form, and in that of a calx or flowers, it diſſolves readily in all acids, and precipitates from them almoſt all the other metallic bodies.

The calces or flowers of zinc are difficultly revived into their metallic form. Though perfectly fixed in the fire ſo long as they continue in a ſtate of calx; yet, as calces in general require for their revival a greater heat than that in which the metal itſelf melts, and as a full melting heat is the greateſt that zinc can ſupport; the inſtant they are revived, they burn and calcine again in open veſſels, and eſcape through the pores of cloſe ones. Hence ſome ores and preparations of this metal have been long kept in the ſhops, and even chemically examined, without being diſcovered to be ſuch. The revival may be effected, by uſing compact veſſels, of ſuch a ſtructure, that the zinc, in proportion as it is reſtored to its metallic form by the charcoal powder or other inflammable additions commonly made uſe of for thoſe purpoſes, may be ſuffered to ſublime or run off from the heat without being expoſed to the outward air; or by adding ſome other metallic ſubſtance to detain it, as copper, which is thus changed into braſs.

(a) Expunged.

*(b) Or rather of the weaſel kind.

This metal has but lately been received into the ſhops in its own form; in which it deſerves a place, as affording preparations ſuperiour to the ores or productions of it now made uſe of. A white vitriol made from pure zinc, by diſſolution in the diluted vitriolic acid and cryſtallization †, is doubtleſs preferable for medicinal uſe to the common impure white vitriol; and the white flowers, into which it is changed by deflagration ‡, to the very impure calamine and tutty. Moderately pure white flowers, ſublimed from it in the braſs or other furnaces, wherein zinc or its ores are melted with other metals, were formerly kept in the ſhops, and diſtinguiſhed by the names of *pompholix* and *nihil album*.

† Vitriolum album *P. Ed.*

‡ Calx zinci *vulgo* flores zinci *P. Ed.*

* The flowers of zinc were firſt uſed as an internal medicine by the celebrated chemiſt Glauber, but were little known in practice till Dr. Gaubius, of Leyden, gave an account of their virtues in his *Adverſaria*. They have ſince been much employed in convulſive and ſpaſmodic diſeaſes, and ſometimes with good effects. Even obſtinate epilepſies have been rendered much leſs violent by their uſe. Like all other medicines, however, in diſeaſes of this claſs, their good effects are often only temporary, and they often fail altogether. When the flowers are genuine, a grain or two generally at firſt excites nauſea or ſickneſs, but by degrees a conſiderable doſe may be taken with little or no ſenſible effect. As they are liable to be adulterated, it may be proper to mention, as teſts of their purity, that they make no effervеſcence with acids; and that, when expoſed to a ſtrong heat, they become yellow, but on cooling, turn white again. An application for external uſe, made by mixing one part of

flowers of zinc with ſix of the ſimple liniment of wax and oil, is directed in the Edinburgh pharmacopœia.

Unguent. e calce zinci *Phar. Edin.*

ZINGIBER.

ZINGIBER Pharm. Lond. & Edinb. & C. B. GINGER: the root of a reed-like plant (*Amomum Zingiber Linn.*), growing ſpontaneouſly in the Eaſt Indies, and cultivated in ſome parts of the Weſt; brought over in knotty branched flattiſh pieces, freed from the outer bark, of a pale colour and fibrous texture: that which is leaſt fibrous is accounted the beſt.

THIS warm aromatic root, of common uſe as a ſpice in flatulent colics, *&c.* appears to be much leſs liable to heat the conſtitution than might be expected from the penetrating heat and pungency of its taſte, and from the fixedneſs of its active principles. It gives out the whole of its virtue to rectified ſpirit, and great part of it to water, tinging the former of a deep, the latter of a pale yellow colour: the ſpirituous tincture, inſpiſſated, yields a fiery extract, ſmelling moderately of the ginger: the watery infuſion, boiled down to a thick conſiſtence, diſſolved afreſh in a large quantity of water and ſtrongly boiled down again, retains ſtill the heat and pungency of the root, though little or nothing of its ſmell: there does not ſeem to be any of the common ſpices whoſe pungency is of ſo fixed a kind. In the ſhops are kept a ſyrup made from an infuſion of three † or four ‡ ounces of the root in four † or three ‡ pints of boiling water, which is agreeably impregnated with its warmth and flavour; and the candied ginger ‖, brought from abroad, which is likewiſe moderately aromatic.

Syr. zingib.
† *Ph. Edinb.*
‡ *Ph. Lond.*

‖ Zingiber conditum *Ph. Edinb.*

*POSTSCRIPT.

Some progreſs having been made in printing this edition before the publication of the *Edinburgh Pharmacopœia* of the preſent year (1783), the following alterations and additions could not be noticed in their proper places.

Weights and Measures. In order to avoid the confuſion ariſing from the promiſcuous uſe of terms ſignifying both weight and meaſure, the college have thought proper entirely to aboliſh *liquid meaſure*, and to reduce every thing, as well fluid as ſolid, to *troy weight*.

Pilulæ Aloeticæ. The ſal polychreſt in theſe is omitted.

Tinctura Sacra. Leſſer cardamom ſeeds are ſubſtituted to Jamaica pepper; and two pounds of wine is directed inſtead of one pint and a half.

Ambragrisea expunged.

Angelica sylvestris added.

Tartarus emeticus *ſive* antimonialis, is now directed to be made in the following manner. Infuſe butter of antimony in water containing as much fixed alkali as will precipitate all the antimony.

Waſh and dry this precipitate; and boil nine drams of it with two ounces and a half of finely powdered cryſtals of tartar, till the powders are diſſolved. Strain the ſolution, evaporate to a pellicle, and ſet it to cryſtallize.

Vinum e Tartaro Antimoniali made by diſſolving tartar emetic in white wine, in the proportion of twenty-four grains to a pound.

Emplastrum e Hydrargyro, *ſive* Cæruleum (in place of *Empl. Mercuriale)* made of common plaſter ſix parts, quickſilver three parts, oil-olive and white reſin each one part.

Pulvis Mercurii cinereus. Diſſolve quickſilver in equal its weight of weak nitrous acid; dilute the ſolution with water, and add ſpirit of ſal ammoniac enough to precipitate all the mercury. Waſh and dry the precipitate.

Tinctura foetida. Two ounces of aſafætida diſſolved in a pound of dulcified ſpirit of ſal ammoniac.

Hyoscyamus. The inſpiſſated juice of it is directed as an officinal.

Tinctura Moschi. Two drams of muſk diſſolved in a pound of rectified ſpirit.

The three following articles of the Edinburgh catalogue were omitted in their proper places; the firſt through miſtake, the two laſt for want of ſufficient information concerning them, which the editor at length obtained by the favour of Dr. Duncan.

ACONITUM.

ACONITUM Pharm. Edinb. Aconitum Napellus Linn. Blue Wolfsbane. This is a perennial plant, having many ſtalks three feet high or upwards ariſing from one root; alternate petiolated leaves divided into five parts, each portion cut into linear ſegments; and terminal bunches of irregular blue flowers with five petals, many ſtamina, and three piſtils, ſucceeded by three capſules containing ſeveral ſeeds. It is a native of various parts of Europe, and of Virginia; and is planted in gardens with us.

Blue wolfsbane when freſh has a ſtrong odour, but no peculiar taſte. The leaves powdered are ſaid by Stœrck to impreſs the tongue with a durable acrimony; but Bergius*(a)* aſſerts that he did not find this to be the caſe; and from this circumſtance, and the figure of the plant given by Stœrck, he concludes that the ſpecies with which he made his experiments was not the *Napellus*, but the *Aconitum Cammarum* of Linnæus, which much reſembles it*(b)*. The expreſſed juice has an ungrateful ſmell, and an acrid, ſlightly ſtyptic taſte. On inſpiſſation it yields an extract, of ſimilar ſmell and taſte, and ſubſaline.

Succus ſpiſſatus Aconiti *Pharm. Edin.*

The freſh plant has long been known as one of the moſt virulent of the vegetable poiſons. It occaſions convulſions, giddineſs, inſanity, violent purgings both upwards and downwards, faintings, cold ſweats, and death itſelf. Dr. Stœrck was the firſt who ventured to introduce it into medicine. He found that the extract given to the quantity of ten, twenty, and even thirty grains, excited a ſweat without inconvenience; and by perſiſting in the uſe of it, great relief was obtained in fixed rheumatic and arthritic pains, ſcirrhous glandular tumours, venereal nodes, anchyloſes, amauroſis, and other ſimilar complaints. Other practitioners have experienced the ſame good effects in ſome degree, and the Edinburgh college has received the extract as an officinal. In this, as in all the other medicines of ſuſpicious and dangerous properties, it is proper to begin with very ſmall doſes, and increaſe them as they can be borne.

CURSUTA.

CURSUTÆ radix Pharm. Edinb. This is a foreign root, which has been uſed by ſome practitioners at Edinburgh for more than forty years. It is a ſtrong bitter, and has very much the appearance and taſte of gentian. Dr. Home, in his liſt of the materia medica, ſtiles it *Gentiana lutea ſylveſtris*; while he terms the common gentian, *Gentiana lutea ſativa*. No botanical author, however, makes this diſtinction; nor can the name of curſuta be met with in any writer that the editor has conſulted.

(a) Mat. Med. 483.

(b) Haller *(Stirp. Helv.)* makes the ſame obſervation.

conſulted. The Edinburgh college received it on Dr. Home's recommendation; but it is little uſed there, and is not in general kept in the ſhops.

HIPPOCASTANUM.

HIPPOCASTANUM Ph. Edinb. *Æſculus Hippocaſtanum Linn.* HORSE-CHESTNUT. The fruit of this tree, which is a trilocular capſule, containing two ſeeds in each cell, has been given as a food to ſheep; and ſteeped in water, ſo as to extract its bitterneſs, is ſaid to fatten poultry. It falls ſpontaneouſly into a ſaponaceous gluten, which has been uſed inſtead of ſoap for waſhing linen. No writer mentions its medical application; but the Edinburgh college have admitted it on the recommendation of Dr. Gardiner, who ſays, that three or four grains of the powder ſnuffed up the noſtrils in the evening, operates next morning as an excellent ſternutatory, and thereby proves very beneficial in obſtinate inflammations of the eyes.

The bark of the horſe-cheſtnut has been propoſed in Italy, according to Haller, as a ſubſtitute to Peruvian bark in the cure of intermittents; and the experiment has proved ſucceſsful (a).

(a) *Stirp. Helvet.* I. 442.

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